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Original Articles

VENEREAL DISEASES

By James S. Sprague, M.D., Belleville, Ont.

"Lo, the pallid tryponema,
Hated most of all bacilla,
Hated by the country doctor
And the specialist so clever."

Some gonococci, duplex and small
(They were born at a picnic the previous fall,
And by agile turn and twist in flight
Had escaped the maw of the phagocyte)
Were mourning, each to the other twin:
"What sort of a hole is this we're in?"
—"O to breed in the infant's eye, in the swollen joint as well—
And the facts supply, when deacons lie, and "cart-wheel" stories tell."

—*Cin. Lan. and Clinic.*

"The care of the public health is the first duty of a statesman," said Disraeli, but the exercise of that duty—encouraged, first by medical gentlemen, in time, frequently becomes their work for the betterment of the world. The incentive to present this paper *at this date* is due to the articles by Drs. Hodgetts and Clarkson in October issue of *Can. Pract. and Review* and of editorials in these pages, although before these appeared this paper was in preparation. In the apocryphal writings of the Old Testament, the 38th chapter of the book of Ecclesiastes—or a portion of the chapter, is

devoted to the physician, his duty, the divine nature and dignity of his calling, and his dependence on the Most High, the origin of his medicines, etc. The divine writer says very wisely: "Honor the physician with the honor due unto him, for the uses which we may have of him, for the Lord hath created him." (We wonder if the good Lord tolerates osteopaths to use the *distinction* of *physician* or *doctor*—or does the dictionary?) "For from the Most High cometh healing, and he (the physician) shall receive honor of the King. The skill of the physician shall lift up his head, and in the sight of men he shall be in admiration. The Lord hath created medicines out of the earth, and he that is wise will not abhor them."

And he has given men skill that he might be honored in his marvellous works. With such does he heal men and taketh away their pains.

"My son, in thy sickness be thou not negligent, but pray unto the Lord, and He will make thee whole. Leave off from sin and order thy hands aright, and cleanse thy heart from wickedness . . . . Then give place to the physician, for the Lord hath created him, let him not go from thee, for thou hast need of him. There is a time in their hands there is good success" (especially in early stages—than a salver full of salvarsan, when the wages of sin tell the story). "For they shall also pray unto the Lord that He shall prosper that which they give for the ease and remedy to prolong life." This does not teach Osteopathy, Chiropractics, the Christian Science or any fake cult. The above advice, says the Lord, will prosper the prescribed methods of the physician; anyway, let him that sinneth fall into the hands of the physician. Yes, better than later on to fall into the hands of him who gives the "*made-in-Germany*" salvarsan mixture.

In regard to these holy prescriptions and suggestions, we must admit that they and other sacred and ancient epistles teach, are worth trial in these days, for *Nam sana est veterum librorum scriptura, quae sic est accipienda*, fully believing, too: *optimi consiliarii mortui.*

Brother, in the bonds of medicine, this, my paper, is presented as an anthology—as texts for many sermons and many reflections, suggestions and sorrows when eugenics, phylogenses and similar studies are becoming the concern of the most civilized nations. We present our analecta as gems of truths, and which, by association, may appear of greater value and teach more than if one man's opinions were given—however, the thread only that

forms the analecta is mine in the gathering and in the arrangement thereof, for I must admit I am a "poacher in obscure volumes." I commence (Incipiam):—To him, to them, whom lust sexual has their life worth destroyed the pathology of the great English dramatist is applicable: "The life of all his blood is touched corruptibly; and even his own pure brain, which some have vainly supposed was the soul's frail dwelling place, doth by the idle comments it makes foretell the ending of mortality."

More than 2,000 years ago Epicharmus said "soberness and constant doubt, these are the marrow and bone of the mind," especially among and by members of our profession, for they point to *via recta ad vitam longam*. As regards our work, Dr. Garth, a contemporary of Dryden, tells us a part of it, and names a few restless ferments with which we contend in practice. Febris is first: The hag, relentless, hears the virgin's sighs, and sees the infant's tears. In her parched eyeballs fiery meteors reign; and restless ferments revel in each vein. Then hydrops next appears amongst the throng: bloated and big, she slowly sails along. But, like a miser, in excess she's poor; and pines for thirst amidst her watery store. Whilst meagre phthisis gives a silent blow; her strokes are sure; but her advance slow. No loud alarms, nor fierce assaults are shown; she starves the fortress first, then takes the town."

Paracelus tells us "the body has been given us without venom, and whatever makes a man sick is the venom that gets into his nature from outside." If so, herein are studies worth one's best energies. As regards sexual disorders herein named it becomes us, our brothers' keepers, "to write the vision (of our research) and make it plain upon tables that he may run who, as Habakkuk says, readeth it." Woman, it has been said, is the thermometer of humanity. She rises with the moral standard of the male and falls as his standard falls, and wherever prostitution is rife the moral tone of men is low. In Atharva Veda (Sanscrit), a writer in *London Lancet* discovers that a very good imitation of modern surgery was practised in India in the third century B.C. The great Indian surgical and medical authority of that period was Sushurta. He had what many of us regard as sound views on medical politics, and his ethics were the highest, for he says: "A physician experienced in his art, but deficient in his knowledge of the science of medicine, is condemned by all good men as a quack, and deserves capital punishment at the hands of the King." Again, he says, "the patient who may mistrust his own parents, sons

and relatives should repose an implicit faith in his own physician, and put his own life into his hands without the least apprehension of danger; hence a physician should protect his patient as his own begotten son," yes, in all cases, except venereal disorders, and then the chief medical health officer should know the facts, for the nation's interests are of greater importance and must be conserved. " It is the doctor, and he alone, who knows no sentimentalism, for he dominates action for the amelioration of many evils, and deplores damaged goods. *Hearst's Magazine* says of Brieux's 'Damaged Goods': There is no weak or morbid handling of the theme. The doctor appears in his high and ideal function as the modern high priest of truth. Around him writhe the victims of ignorance and criminals of conventional cruelty. Kind, stern, high-minded, clear-headed, yet human-hearted, he towers over all, as *the master*. This is as it should be. The man to say the word to save the world of ignorant wretches, cursed by the clouds and darkness which a mistaken modesty has thrown around a life-and-death instinct, is the *physician*." If these words are truths, and no one so bold to deny them, are we not prevented in our altruistic work by our Legislatures—even in this, our native province—when many states are offering us many commendable lessons for reforms in sexual sins. " The greatest criminal is he that poisons the germ cells " is becoming more and more as a widely recognized truth. One fact is this, and the world is recognizing it in its fullness: that science, especially that of our profession, is bound, as Sir William Thompson has said, by every law of honor to face fearlessly every problem that can be fairly presented to it.

We must agree with Chaucer, whose words are: " That out of olde feldes, as man saieth, comith all this newe corn from yeare to yearn; and out of olde bookis, in good faithe, comith all the newe science that men learn." " The world is beginning to perceive," says Francis Galton, " that the life of each individual is, in some real sense, a continuation of the lives of his ancestors." Each of us is the footing up of a double column of figures that goes back to the " first pair," and, with Holmes, we must agree that we are " omnibuses in which our ancestors ride," and our decisions must be tempered with Burns' words:

" What's done we fairly may compute,
But know not what's resisted."

We must tell you what old Prior said very many years ago:—

" For a distemper of this kind
(Blackmore and Hannes are of my mind),
If once it youthful blood infects,
And chiefly of the female sex,
'Tis scarce removed by pill or potion,
Whate'er might be our doctor's notion."

Quo Vadis Domine? I present the ballad (Syphilis), by John Gay (1685-1732):

" I knew a yeoman who for thirst of gain to the great city drove from Devon's plain his numerous herd. His herds he sold, and his deep leathern pocket bagged with gold. Drawn by a fraudful nymph, he gazed, he sighed; unmindful of his home and distant bride, she leads the willing victim to his doom through winding alleys to her cobweb room; thence through the streets he reels from post to post. The vagrant wretch the assembled watchman spies, he waves his hanger, and their poles defies. Deep in the roundhouse pent all night he snores, the next morning vain his fate deplores. Ah! hapless swain! unused to pains and ills, canst thou forego roast beef for nauseous pills? How wilt thou lift to heaven thy eyes and hands when the long scroll the surgeon's fees demands? Or else (ye gods avert that worst disgrace) thy ruined nose falls level with thy face; then shall thy wife thy loathsome kiss disdain, and wholesome neighbors from thy mug refrain." It is needless to state that the germ of syphilis is the spirochetae pallida, or the spiral-shaped germ. Timothy, in his second epistle, reminds us that there were Devonians in his day, and says: " For of this sort are they which creep into houses and lead captive silly women laden with sins, led by divers lusts."

Aristotle says: " Drunken women have children like unto themselves," and Plutarch remarks: " The drunkard by inheritance is a more helpless slave than his progenitor, and his children are more helpless still, unless on his mother's side there is an untainted blood. For there is not only a propensity transmitted, but an actual disease of the nervous system." Robert W. Service in *Sourdough* makes the *Parson's Son* say: " If God made me in His likeness, sure he left the devil inside," and, no doubt, these were parts of the Devonian farmer's prayers; if not, he could console himself with Byron's words:

" My days are in the yellow leaf,
The flowers, the fruits of love are gone;
The worm, the canker, and the grief are mine alone."

for it cannot be said "he goeth after her straightway as an ox goeth to the slaughter, or as a fool to the correction of the stocks," as named in Proverbs.

Let us not say: "*Thy fury inward on thyself prey and consume thee!*" In that sublime, philosophical and didactic poem *De Natura Rerum* of Lucretius are these words of a wrecked life: "The pains of hell exist not in the grave alone, but here, and curse our living"—"and yet without her, the *Meretrix,*" says Lecky in his *Morals*—"the unchallenged purity of countless happy homes would be polluted," etc.

"*O! tempora, O! Mores.*"

It is said (vide *Religio Medici*) that *Plato's* year appears after a lapse of two thousand years, in which appear or reappear many social and other interests in all their fullness; and if such predictions be a fact, it would appear, if Horace were to re-visit the pale glimpses of the moon and continue his odes, satires, epodes and epistles, he would find plenty material for copy. Juvenal, too, could add much to his satires to prove this age is thoroughly saturated in lust. These two satirists deservedly and timely lashed society, and their works tell sad stories of their times, and corruptions equalled by our own people. Many sentences of the works of Horace—even of Juvenal—are not for young readers, yet instructive and irresistibly attractive to the students of morality and minds of cultured men. Society is equally as debased as when they lived. The slashed and harem skirts, silhouetted garments, tattooed legs, falsely and deceptfully inflated bosoms, etc., ladies' fashion magazines, home journals, fashion plates, licentious literature of public books and engravings, etc., would cause Inachia, or her named in Epode vii. (Horace) and (*In Anum Libidinosam*) to blush in her white vest.

We must agree with Dr. Morrow, who says: "We may well ask why certain infectious diseases are elevated to the dignity of a danger to the public health and every effort made to prevent their spread, while another class of diseases, compared with which the morbidity of the former is but a molehill to a mountain, is completely ignored."

However, we must admit, with Pope:—

> "Vice is a monster of so frightful mien,
> As to be hated, needs but to be seen;
> Yet seen too oft, familiar to the face,
> We first endure, then pity, then embrace."

And let us not only practise, but teach, that "prudent, cautious self-control is wisdom's root," as told by the immortal Burns, who confessed his sins, even as did *Holy Willie* in his prayer—even thus good for the soul:—

"But yet, O Lord, confess I must,
At times I'm fashed wi' fleshly lust;
And sometimes, too, wi' wardly trust, vile self gets in;
But thou remembers we are dust, defiled in sin,"

and, remembering that, she—the nymph—"was the sort by whom fool men were snared." And in the words of the greatest of saints—even St. Chrysostom—a necessary evil, a natural temptation, a desirable calamity, a domestic peril, a deadly fascination, and a painted evil.

"Sin may be clasped so close we cannot see its face (Trench),
Vile intercourse where virtue has no place (Somerville);
Then keep each passion down, however dear (Thompson),
Thou *pendulum* betwixt a smile and tear (Bryant);
Her sensual passions, let faithless pleasures lay (Dr. Smollett),
With craft and skill to ruin and betray" (Crabbe).

That the Bard of Avon knew a few facts in regard to the pains of periosteal nodes, tendon gummata, ozena, alopecia, sallowed skin, laryngitis, etc., read *Twelfth Night* (Sir Andrew) in *Love's Labor Lost, Pericles, Prince of Tyre, All's Well That Ends Well*, etc.

In the classical address of Dr. Abraham Jacobi (New York) at McGill in 1911 we find these words:—

"Wutzer was, like Fournier and Erb after him—perhaps even more so than they—a great believer in the ubiquity of syphilis. With twinkling eyes he would look up to us suggesting that everybody is a little syphilitic," and to the ordinary M.D. confirmation of this opinion is often afforded in various characters and characteristics and when least expected. Shall we say: *Ignorabimus?* However, let us repeat Huxley's words: "When we know nothing we can neither affirm nor deny with propriety"—*nec est fas scire omnia*, and "there are occasions and causes why and wherefore in all things."—(Shakespeare). There is no branch of the practice of medicine—surgical, gynecological, medical—in which syphilis does not occupy the premier position as a causative agent, says Dr. F. Arnold Clarkson, whose paper, "*Venereal Disease as a Public Health Problem*," is before me, and heretofore named, and hospital authorities endorse his statements as worth preservation.

Sir Malcolm Morris has recently said to us: "Our mission is the service of humanity. And at this juncture we can do no greater service alike to medical science, whose votaries we are, and to mankind, whose servants we claim to be, than to urge upon our Governments the imperative necessity of taking systematic and thorough action to suppress one of the *greatest scourges* of the human race—*syphilis.*" And who is she who "remains while creeds and civilizations rise and fall, who is this eternal priestess of humanity, blasted for the sins of the people"?

Wm. Lecky's History of European Morals (1869) says: "Under the circumstances there has risen in society a figure which is certainly the most *mournful,* and in some respects the *most awful,* upon which the eye of the moralist can dwell. The unhappy being, whose name is a shame to speak, who counterfeits with a cold heart the transports of affection and submits herself as a passive instrument of lust, scorned, insulted as the vilest of her sex, and doomed for the most part to diseases and an early death—appears in every age as the perpetual symbol of the degradation and the sinfulness of man," and whom many virtuous women are copying—even copying her—the *meretrix* and her seductive arts.

Is she to advertise her meritricious and lecherous allurements while "creeds and civilizations rise and fall"? Are not venereal diseases equally necessary to be reported, stamped out, exposed and prevented? If so, we of this Province can find much instruction by copying the state rulings of Indiana and several states, whose civilization in public health interests is more marked than that of Ontario, or any one of its sister Provinces.

"The fool was stripped to his foolish hide,
Which she might have seen when she threw him aside,
(But it isn't on record the lady tried),
So *some* of him lived, and the *most* of him died," said Kipling.

From Anthon's Classical Dictionary we find reference to the dispute between Jupiter and his spouse. On some occasion Jupiter and Juno fell into a dispute as to which derived more pleasure from the conjugal state, the male or the female. Unable to settle it to their satisfaction, they agreed to refer the matter to Tiresias, who had known both states. His answer was, that of ten parts but one falls to man. Juno, incensed at this, deprived the guiltless arbitrator of the power of vision—hence "love is blind and temporary madness."

Thomas Holmes tells us that practical experience of trying to save the lost will soon destroy the assurance of those "who talk with rare unction about engaging in rescue work." Of fallen women he says: "Mentally diseased or sensually possessed, they present a hopeless problem, and unless science can find some method of treating them as patients the problem will go unsolved." If science and moralists advocate early marriages, the destruction of one-half, at least, of the books of our public libraries, the denunciation of madam struggling to be Adam, that the pursuit of "careers" by women is as fatal to domestic happiness as is a barren womb, that the "Brooks'" so-called colleges for young girls are nurseries for future unlooked-for homes, for which they are unfitted as companions or ideal mothers, the purification of moving picture shows, less school teaching and books on sexual subjects, less study of fashion plates, corsets, bust developers, ladies' home journals, and more about home life, hospitals for women would cease to exist and prostitutes become unknown.

My apology for this presentation is (1) loyalty to this, my native Province, and in this saying: "If it is right, there is no other way; brave words to speak, and braver still to live" and to teach these truths, and (2) "who dare think one thing and another tell, my heart detests him as the gates of hell." When our homes and family altars are contaminated: "*Qui non libere veritatem pronunciat proditor est veritatis pro aris et focis.*"

Let us not henceforth foolishly consider any one of the sins herein named as beneath our urgent study, and this paper or similar papers as illustrating any other than a serious interest and sense and not:

> "Just a bit of badness,
> Man and woman's *madness,*
> Studies of life's *sadness*
> Versed with ink and pen."

yet it must be admitted again that *the greatest criminal is he who poisons the germ cells.*

VITAL RESISTANCE

By A. C. E.

The devil of temptation attacked Dr. Forrest Gilman in a very peculiar way. This temptation does not often assail members of the medical profession, and when it does it is generally batted out of the box. Occasionally, however, it succeeds.

The laity, as professional people designate the balance of the general public, do not and cannot understand this particular devil of temptation. In fact they mostly ridicule it. But to the highly ethical medical practitioner it is his fetish—his god.

Dr. Forrest Gilman had practised in the big city the full term of ten years—the time, generally conceded, required to create a lucrative practice. But the practice had not come to him. He seemed to possess all the necessary attributes and qualifications for success, a good presence—for he was tall, straight as an arrow, of military bearing, handsome; a good manner—for he was pleasant-spoken, affable, kindly, sympathetic. He had hosts of friends, but somehow or other the patients all went to other doctors. There was no doubt of his ability—he had been a first-class honor man each year of his medical course; and it was his proud boast amongst his immediate confreres that, in the first four years of his professional life, with moderate practice, he had not lost a single case.

At two and thirty he was deeply in love with beautiful Madge Pemberton, the prettiest of the three daughters of Professor Pemberton of the University. The Professor would have been very glad, indeed, to have had his salary of $2,500 thus relieved; and the fiancée was willing to participate in her lover's chances of success.

Though it cost his pride dearly, Forrest Gilman bared his soul to her one evening when he was in a condition of deep depression over his outlook in life. The day had been a steady downpour of rain which added to his gloom. They were seated on a divan in her father's drawing-room.

"My dear Madge," he began, "I'm afraid I'm not treating you fairly," as he passed a caressing arm around her well-moulded form.

Madge Pemberton was one of those sweet, clinging creatures

who seem to invite protection, and as she nestled by his side she questioned:

"Why Forrest—my Forrest?"

"We have been engaged three years now and I have never asked you to name the day."

"But I have always told you I could wait—why should that worry you?" for she felt he was indeed deeply worried—and she patted his cheek.

"The truth is—and I'm ashamed to own it—I'm——" hesitatingly.

"The truth is—what—dear?" reassuringly.

"The truth is, Madge, dear, after ten years' practice in this big city I have not saved enough money on which to get married," with a halting sigh.

Her intuition told her there was something more, so she simply whispered as she did not care to be inquisitive about his private affairs:

"Go on!" as she continued stroking his cheek.

"It's awful for me to have to tell you this, Madge. It stultifies my manhood. But what can a man do when he has simply to sit in and wait?"

He felt a slight shiver in her frame as though of doubt in her mind, and as she vouchsafed no reply he proceeded:

"The truth is, my dear Madge, I cannot collect enough money from my practice to more than barely support myself, let alone a wife. I can make enough for a moderate household, but there are so many poor people who cannot pay, so many people who will not pay although they can, so many dead-beats, that I do not collect one-half I place upon my books. In a big city like this where there are so many doctors on the teaching staffs of the medical schools and colleges—the old cry of a university town—so many medical students who are advertising their favorite professors all the time all over the town amongst their friends and acquaintances—that is one thing which militates against the general practitioner such as I. Then there are so many hospitals and dispensaries where more than the very poor go and get charity treatment—and these hospitals must have so much clinical material for teaching the students that that is another thing which cuts into the practice of the non-school men. These charities are all sorely abused. Then again the whole city is permeated through and through with lodge practice—fancy treating a man every time he gets sick day or night for a dollar a year! As for lodge prac-

tice I don't believe in it; I can't believe in it; I detest and hate it. There ought to be some law to make people pay their honest debts —one can't be suing individuals all the time for two, three, five or ten dollars. I suppose in the ten years I've been in practice I have eight to ten thousand dollars on my books I shall never get, yes, probably twelve or fifteen. Then it costs so much to live nowadays; rent is so high, and everything is so dear. So I say it's not fair to you nor honest in me to hold you to your plighted troth—and yet, Madge, my love, my all, I cannot give you up," and his strong arms encircled her, his whole frame shook intensely, and his head sank upon her shoulder.

Madge Pemberton was a dear, good girl. Silently she disengaged herself from her loved one's embrace, and, taking his face in her palms, kissed the moisture from his cheeks.

"Never mind, dear Forrest," she kissed, "there's a better day coming. You are not the only one who has had a hard struggle to succeed in life. Ten years, I know, is a long time to battle against fate whilst having to maintain appearances, but I feel you will succeed. You deserve to succeed. God is good!"

"Ah!" he sighed, with a sad shake of the head, "but not to me."

She twined her arms about his neck and solaced: "I will never marry anyone but you, dear Forrest," and then, as another thought shot through her mind, "but you, dear, you are young, handsome, in a noble profession, respected—why not you? Some millionaire's lovely daughter——"

His hand closed over her exquisite lips as he bent a firm, resolute gaze into her soft brown eyes: "Never, Madge! No one but you!"

So they parted.

All that livelong night Forrest Gilman tossed in troubled sleep. Two alternative situations beset him. Try as he would to drive them both out of his thoughts they would not out. Every fitful doze ended with these two spectres presenting themselves. He reversed, slapped, and pounded his pillow by turns. He was not a man given to sedatives—had never had occasion to take any in his life—was even over-cautious in administering them to his patients. Better get natural sleep, he would advise, than resort to drugs. The loss of a few nights' sleep now and again was not harmful to any man. Nature will assert herself. And he always practised in himself what he preached to others. So he fought the long night through.

The morning found him unrefreshed, but strong and determined. He had selected his alternative. He would, however, take time to mature his plans.

All unconscious to Dr. Forrest Gilman a beautiful pair of eyes had been upon him for some months. He did not know that the owner of those jet-black eyes framed in long black eyelashes and surmounted by delicately-traced eyebrows of a similar color possessed the unusual charming accompaniment of a wealth of golden hair. It was quite possible he had never seen such a contrasting combination. If he had he would have known that the two colors generally go with a very lovely face, a tall, willowy form and grace superb. He was soon to know.

That day dragged along for Dr. Forrest Gilman as many others had done before—no patients in his consulting-room—no outside calls to make. But he was ever a busy man. In a small laboratory at the rear of the surgery he spent all his spare time perfecting his knowledge in physiological chemistry and conducting and prosecuting his own researches—a science at this time just coming into prominence amongst medical scientists.

At three o'clock in the afternoon a telephone call came. It was from the office of a brother practitioner who was engaged upon an outside case. He had frequently assisted this busy and popular physician, who counted some of the best families in the city in his clientele. Dr. Gilman had not been told that the patient had requested that he be sent when she learned her own doctor was out. The name he recognized as belonging to one of the great railroad magnates of the city.

Although well-schooled, in full possession of himself as regarded emergent calls, he was just a trifle nervous when he stood in the handsome reception-room of the millionaire magnate, Sir Ronald MeMahon, and Myrtle, his lovely and only daughter, presented him her hand.

"An accident, doctor—only a trifling accident—embroidering—the needle broke—and I'm afraid the point is in my thumb—but it is so very painful—I'm so upset—I dread blood-poisoning—I couldn't wait," and those brilliant black eyelashes beneath their crown of gold, and of which Dr. Forrest Gilman had never even dreamed, laughingly swept the broad, full forehead, the straight nose, and clear-cut, square-cut face of the young physician, while the eyebrows angled into just a suspicion of distress rather than of pain.

"It's not at all serious—the point is there all right," assured

Dr. Gilman, as he took the soft, finely-molded extremity in his hand and examined the tiny wound, a thrill of pleasure pervading his frame. "I'll just use a little cocaine and be as gentle as I can. You will not feel it at all." He spoke hurriedly, his clear, manly eyes bearing full strong upon her that Myrtle was conscious of a warmth suffusing her neck and countenance.

"Oh, no! You must not hurt me, indeed. I cannot stand pain. My nerves are none too strong," she replied beseechingly.

It was but a simple operation, and when it was all over Dr. Forrest Gilman wondered she hadn't waited for the return of her own physician.

"Now, while you're here, Dr. Gilman, I want you to prescribe for me. I know I'm nervous," and she sank into a luxurious davenport, and motioned the young physician to a seat on the same receptacle.

He knew she was beautiful. He could now study her for a little longer. As far as he could judge—and he knew with blonde hair it was a more difficult matter—she must be five or six years older than Madge Pemberton. The rare contrast of color was deceptive, but exceedingly beautiful.

"I'm afraid I cannot prescribe for you, Miss McMahon," was his answer. "You see I came on a call from the office of your own physician, and you know, or shall, when I inform you, that it would be decidedly unethical for me to keep you as a patient."

"But, Dr. Gilman," she burst out, "I requested them to send you," and she could have bitten her tongue for making the reply.

"That was very kind of you, Miss McMahon," almost an understanding look in his eyes.

"At least then, Dr. Gilman, you can tell me what I can do. I seem as though I want to fly off somewhere, and yet I'm tired of travel. Automobiles bore me. I haven't been out in my limousine for a whole month. But I do love driving—not carriage," as she saw he was about to suggest carriage drives—"single—I've a lovely turnout, but then, dear dad always insists upon James going with me. James is all right for the carriage, but one hates to be always driving the coachman out afternoons."

"Why not drive a friend when you love driving so much," he suggested.

"Where is he?"—she could have taken another nip at her unruly member, but laughingly rippled on: "One can't be always driving out their girl friends." Then arising: "Thank you, Dr. Gilman, so much! My thumb doesn't pain a little bit."

In the evening Dr. Gilman called up the family physician and reported the accident and what he had done, and also reported that Miss McMahon wanted him to prescribe for her nerves. The doctor informed him that he should have done so, and furthermore told him that if she called for him again he was to go and not mind anything about medical ethics.

The truth was Myrtle had already called up her own physician and had told him that she was going to employ Dr. Gilman and give him a chance at her malady, which she tried to make herself believe she had, and laughingly the old doctor had acquiesced. He was not going to stand in the way of young Gilman making such a good match with a beautiful girl, the only child of a multi-millionaire—and he knew how precarious often was the practice of medicine.

The very next afternoon Dr. Forrest Gilman was again summoned to the millionaire's mansion. He examined the thumb and re-dressed it, and assured the fair possessor that there was no danger of blood-poisoning.

"Now, Dr. Gilman, I want to employ you as my regular physician. Are you willing to accept?" was the business-like way in which Myrtle began the conversation.

"Thank you, Miss McMahon! I'll do the best I can," was the modest rejoinder.

"But I have an unusual proposition to make," Myrtle came back as though in some doubt of the doctor's acceptance. "I feel that I'm not well, and as you have already suggested driving, and as I find driving agrees with me, I want to engage you from three to six every afternoon to drive out with me. I've a very spirited roadster which I love to drive out, and in case of accident I want to have my physician on the spot ready to attend me," she naively intimated; "and," she continued, "as it is a business,"—did he detect a faint emphasis on the word?—"proposition on my part, I agree to pay you $20 a day for this special service."

"Holy smoke!" thought Dr. Forrest Gilman, who had been collecting about that amount a week for the past six or seven years, but he did not say it. Instead he replied: "Thank you, Miss McMahon. I am at your service."

He was confused, bewildered, overjoyed. Madge Pemberton came into his mind. On that amount of money he could marry.

For several weeks they drove out every day. The state of the weather was nothing to Myrtle. The roadster was a magnificent stepper, active, graceful; and the parks, avenues and boulevards

began to recognize the fine-looking couple and the handsome turn-out. Myrtle was an expert whip, but Dr. Forrest Gilman never neglected having his surgical bag in the buggy ready for any unforseen accident. At times he thought her driving reckless. Mostly she would keep her horse well in hand, but there were times when she allowed him loose rein.

In addition to driving out they soon began to dine out. Dr. Gilman would invite Myrtle to downtown luncheon. Then he began to appear at the millionaire's for dinner. The entire evening would be spent afterwards in the parlor with Myrtle. Theatre parties were arranged by Sir Ronald, and it was soon whispered around that Dr. Gilman was the accepted lover of the dashing Myrtle McMahon.

Of course Madge heard of it. Forrest had told her of the professional engagement, but she said nothing. She never even hinted that he might be paying Miss McMahon attention, although his visits to Madge were now not so frequent. She began, however, to believe in her heart that the wheel of fortune was taking a good turn for her Forrest, and, brave little soul, she felt it her duty not to stand in the way of his success.

The professional engagement had been running six months, when Forrest Gilman went one evening to pay a visit to his betrothed. He was plainly agitated.

"Madge," he began, "I'm going to do something to-morrow for which I may be sorry. I've thought it all out carefully for months past. I fear it will mean to me loss of professional respect —ostracism from my confreres. With the easygoing public it will be but a nine-days' wonder, and probably not that. Do you still love me? Will you always love me? And will you always trust and respect me—for I do this for you? I cannot tell you to-night —I shall tell you all to-morrow."

She saw that he was profoundly depressed and troubled.

"I will always love you, Forrest, always trust, and always respect you. You have my heart. Do what you deem best for yourself."

He folded her in his arms without resistance upon her part, kissed her gently on the lips and tore himself sadly from her side. He would never forget the fond, enraptured look in her eyes as he left her.

Good news travels slowly, but all love to hear it.

It came to Dr. Forrest Gilman the next forenoon as he was standing leaning against the counter of the receiving office of a

great daily newspaper, and it was brought to him by no less a personage than Madge Pemberton.

He had sent in his resignation that morning to his medical club, the academy of medicine, the county, state and national medical societies, and he was at that minute engaged negotiating for a display advertisement setting forth what he could perform in the way of curing certain diseases, so many lines a day for the space of one year. When the newspaper appeared on the morrow all his friends—and they were many in the profession—would know that he was an outcast.

"Forrest! I telephoned you! I called at your office and they told me you had come here! Congratulations!" and before he had time to collect himself she hurtled the good news at him: "Father has been successful in having you appointed Professor of Physiological Chemistry at the University at"—lowering her voice to a discreet whisper—"$5,000 a year."

And with woman's impetuosity she thrust a paper she was carrying in her hand into his face where he read, not the announcement of his appointment, but: Scandal in High Life—Millionaire's Daughter Elopes with her Coachman.

Gonorrhea. — M. Nicolle (*Medical Press and Circular*), who has treated over 200 cases of gonorrhea, including several cases of purulent ophthalmia, with his new vaccine, will shortly deliver his secret to the medical world. M. Charles Nicolle, who has made this discovery of a new vaccine against gonorrhea, is Director of the Pasteur Institute at Tunis, and has already made several discoveries in connection with cholera, trachoma, whooping cough, etc., has given this treatment considerable study for the past year. Three to four injections are given every two or three days of two c.c. cubes of a solution containing millions of micrococci. After the first injection pain and general malaise disappear. In chronic cases, the patients are cured after a third or fourth injection, and in acute cases, fifteen days suffice for a permanent cure. It is said the vaccine promises most wonderful results in purulent ophthalmia, as one single injection cures this dreadful disease.

THE TREATMENT OF PUERPERAL FEVER

Barton Cooke Hirst, Robert L. Dickinson and Joseph R. De Lee.

The report of the Committee of the American Medical Association on the treatment of puerperal fever is published in October 25th issue. The purposes of the committee appointed one years ago were to obtain the opinion of authorities and of the profession at large, thus to learn what is the general teaching and practice of to-day; to call general attention to the importance of the subject, and, if possible, to formulate a course of procedure which would be generally applicable to the treatment of sepsis with retained ovular material. Letters were sent to professors and assistant professors of surgery, to professors of obstetrics and gynecology, abroad, and the first three questions were published in *The Journal*.

Q. 1. A primipara with septic abortion at three months, fever two days, hemorrhage negligible, the ovum intact, retained. What would you do?

Q. 2. A primipara with septic abortion at three months, fever two days, hemorrhage negligible, the fetus expelled, placenta retained. What would you do?

Q. 3. A primipara, fourth day after full-term delivery, positive evidence of uterine infection, no hemorrhage, retention of ovular remnants suspected. What would you do?

Q. 4. If you (*a*) believe in active interference, (*b*) when do you do it?

Q. 5. What do you do when hemorrhage complicates sepsis?

Q. 6. If you believe in trusting to nature when ovular remnants are retained, how long do you wait before operating?

To the first the great majority answered they would clean out the uterus.

In the second case the answer was the same.

Third, similar.

To question four the majority answered, "Clean out at once," and the finger was the instrument for most.

Question five elicited that the majority do not fear tampon, and that they believe in emptying the uterus fully to stop the hemorrhage.

The answers to question six were very general and not at all satisfactory.

Two other questions completed the total.

Q. 7. Do you try to distinguish between sapremic and bacteriemic states before operating? How do you do it?

Q. 8. Do you make any distinction between the treatment of sepsis after abortion and that after full-term delivery?

To seven, one-half believe a distinction practical.

The vast majority advocate more active treatment in abortions.

The conclusions drawn from this report are: The majority of accoucheurs and surgeons clean out the septic uterus at once. In the majority of instances it has been found safe to invade the infected uterus with finger and curette, but there are cases where this is dangerous, probably owing to poor quality of resistance in the patient. The experience of the minority has proved that ovular remnants, even though infected in the uterus, do not create such dangerous conditions as was formerly believed. After the uterus is once emptied it should not be again invaded by finger or curette. Few permit antiseptic douches. Quite generally the tampon is used to stop bleeding in infected cases.

GOITRE—DIAGNOSIS AND TREATMENT BASED UPON 1,000 CASES

By Edwin H. Schneider, M.D., Los Angeles, Cal.

Sometime clinical and surgical assistant at the Mayo clinic, Rochester, Minn., Dr. Schneider (*Southern California Practitioner*) sets forth and differentiates the following clinical varieties:

1. Adolescent goitre and goitre of pregnancy.
2. Colloid goitre.
3. Adenomata (encapsulated and non-encapsulated).
4. Mixed forms.
5. Exophthalmic goitre.

Occurring most frequently in the female about the onset of menstruation, and disappearing around the 20th year, the goitre of adolescence is symmetrical, (thyroid shaped), of moderate

degree and fairly firm in consistence. Generally there is only the one symptom of enlargement of the thyroid gland, though nervous patients complain of "an obstructive feeling in the neck." In treating these cases assurance can be given that it is physiological and in time disappears spontaneously. Iodine internally and massage with the ointment of biniodide of mercury will hasten absorption.

Analogous to adolescent goitre is the goitre of pregnancy, occurring with pregnancy and disappearing with parturition. It produces no symptoms and requires no treatment.

Colloid goitres roughly retain the general outline of the thyroid gland, frequently extending over the chest, beneath the clavicles, sternum and even posterior to the pharynx. The gland may be nodular, but is usually softer than the adolescent goitre. When symptoms of pressure develop, a resection is indicated. It should be freely exposed and palpated to prevent any one of its projections being left behind, and continue the pressure symptoms.

Encapsulated adenomata occur singly or in great numbers, arising from any part of the gland. They always have a definite outline. Malignancy of the thyroid gland almost always occurs in the adenomatous form of goitre. There is seen rapid growth, general hardness, early pressure symptoms, involvement of the neighboring lymphatics and thyrotoxicosis. Clinically, the thyrotoxicosis of adenomata differs from that of exophthalmic goitre in that the nervous symptoms do not reach the same degree of intensity. Sometimes single adenomata, frequently overlooked, arise from the lower pole of either lobe and project posteriorly. They may sometimes explain an unaccountable heart lesion. The treatment of encapsulated adenomata is surgical, and the writer doubts if they are ever cured by medical treatment. In those occurring in young adults, not wishing operation, Dr. Schneider prescribes for daily massage over the goitre, the biniodide of mercury ointment and Lugol's solution, 3 gtts. t.i.d., over a period of six months.

In diffuse adenomata or non-encapsulated adenomata, varying in size, occurring generally through the gland, thyrotoxicosis is particularly likely to occur.

Under mixed forms of goitres are those enlargements which do not belong to any one class. The physical findings and symptoms are necessarily also mixed.

Exophthalmic goitre is regarded as an intoxication due to an over-secretion of the thyroid gland. The symptoms usually occur

in this order: Mental irritability, rapid heart action, vasomotor disturbance, tremor, muscular weakness, loss in weight, exophthalmos, diarrhea and vomiting. The nervous symptoms are very important as to the intensity of the intoxication in the early stages—irritableness, restlessness, emotionalism, insomnia, and even manic-depressive insanity. A careful attention to these will reduce the mortality in the early cases. The contra-indications to operation are marked mental irritability, rapid loss in weight, great muscular weakness, dilatation of the heart, over an inch, vomiting and edema or anasarca.

Operation has proven the quickest, most lasting and safest method of treatment. During the past year two hundred and seventy-eight consecutive cases of exophthalmic goitre have been operated upon at the Mayo Clinic without a death. Seventy-five per cent. of the operated cases are promptly cured, and the balance may occasionally show symptoms and require further operation.

In severe cases the operation is done in three stages, a ligation of the left superior thyroid vessels (the least which can be done to lessen the intoxication), followed in about five days by a ligation of the right superior thyroid vessels and then in about three months, when the acute symptoms have subsided, an extirpation of the right lobe and isthmus.

Cases during the maximal intensity should be treated medicinally until the acute symptoms have subsided. Medical treatment before a ligation of the left superior thyroid vessels rarely need extend over a period of six weeks. The essential medical treatment is rest in bed and sympathetic treatment, X-ray, sera, change of climate, suggestion, and the two hundred and thirty-seven varieties of drugs already used for treatment should be regarded merely as palliative. The physician should remember that the heart, liver, kidneys, brain, are being damaged by the intoxication, while drugs are being administered judiciously.

Early mild cases of hyperthyroidism may be permanently cured by double ligation. Old degenerative hyperthyroidism receives little benefit from an extirpation.

THERAPEUTIC NOTES

Facial Acne. — Brocq (*Bull. Gèn de Thér.*) advises to wash the face thoroughly with hot water and soap, or ichthyol soap. Then apply the following ointment to the face, keep on all night, and wash off in the morning: Camphor, Resorcin, aa, 0.50 gram., Precipitated sulphur, 3 grams, Soft soap, 0.75 gram, Prepared chalk, 6 grams, Pure vaseline, 10 grams.

Hernia in Infancy. — Hoguet (Archives of Pediatrics) advocates operation where the hernia cannot be perfectly held in place by a truss. For the treatment of umbilical hernias begin early by applying a small pad over the hernia. This can be held in place with adhesive plaster all round the body, renewing same every ten days. It is important there should be no interruption to the treatment, which generally has to be kept up from five to ten months. In children over two years this may be tried for a few months, and, if unsuccessful, operation.

Hydrocele. — Gomoin (Lyon Chirurgical) secured permanent results in twenty-five cases by a method which utilizes the inguinal canal in the treatment. The scrotum is left intact. The conditions for healing after operation are ideal. The tumor can readily be worked up into the inguinal incision, when it can be evacuated and the vaginalis everted or excised. He has used this incision also successfully in variocele, castration and resection of the epididymus.

Gastritis. — *Conti (Archv. für Verd-Krank)* has used a ten per thousand solution of ichthyol for ten years for rinsing out the stomach in gastritis and malignant disease. The results have been satisfactory. The fluid is poured into the stomach and left there for fifteen to thirty minutes, the tube remaining in place meanwhile. It was tolerated well by his patients.

Pleurisy with Effusion. — *Volkova* (*Pediatria*) suggests pediatrists should give intrapleural injection of adrenalin, 1 to 1,000, in the different forms of pleurisy with effusion. Five of the six patients recovered almost completely in a short time, in eight to thirty days. The ages ranged from two to ten years. The injections, which were given every second day or fifth day, varied from one to six and the doses from 1½ divisions of a common one gramme hypodermic syringe to three, and in one case five divisions were used.

Diphtheria. — An editorial in *The Therapeutic Gazette* says that clinicians all over the world are more and more using initial doses of not less than 10,000 units of antitoxin. If there is any considerable amount of membrane, or the epidemic known to be virulent, it is better to employ not less than 25,000 units within the first eight hours. This should be repeated with doses of 5,000 units every eight hours until the patient is on the high road to recovery. In New York, 100,000 patients have received immunizing doses of 1,000 units, and there has been only one death in a child suffering from status lymphaticus.

Hemoptysis. — *Flaudin* (*Presse Médicale*) having been impressed with the hypodermic injection of emetine in amebic dysentery and the prompt disappearance of blood in the stools, applied the same remedy in hemoptysis, and the results have justified the procedure. He injected into the thigh 1 c.c. of distilled water containing 0.04 c.c. of emetine hydrochloride. In the more severe and threatening cases he repeats the injection twelve hours later and once on the following day in a total of five. In his eight cases the hemorrhage ceased promptly, and as well in twelve cases of other physicians. It has been harmless, and succeeded when all others have failed.

Gastric Ulcer and Hyperacidity: — *Glaessner* (*Weiner Klin. Wochen*) considering that the benefit derived from a gastro-enterostomy might be due to bile finding its way into the stomach gives the details of thirty-three cases of various stomach affections

in which he gave small amounts of cholic acid as the equivalent of bile, 0.4 to 0.6 c.c. of cholic acid. He generally administered it in the form of an emulsion of 0.2 gm. sodium cholate in 0.2 gm. oil, in a gelatine capsule, the patient taking from two to five capsules. In a number of cases marked benefit was obtained.

Purulent Otitis. — The French correspondent of *Medical Press and Circular* gives the following formula for purulent otitis: Boric acid, 1 dr., Subnit of bismuth, 1 dr., Benzoic acid, 10 gr., Formal, 2 drops, Glycerine, 1 oz. The ear should be syringed morning and evening with a warm infusion of tea or camomile. The canal should then be filled with the above mixture, which should be allowed to remain ten minutes, the head being inclined to the healthy side. The liquid in excess should be removed with a plug of absorbent cotton.

Infantile Eczema. — Ochs (*Med. Rec.*) emphasizes *the absence of vomiting* in children with the weeping variety of eczema, most often met with in childhood. A toxemic condition is set up, and the result is a reflex, infantile eczema. It is best then in the treatment to abstain from lotions and salves, and first cut down the amount of the food and the number of the feedings, and prescribe small and repeated doses of calomel. Many times this suffices for a complete cure. If there is no improvement in a week, then look for some other cause. Too much stress cannot be laid on the fact that these children *do not vomit.*

Reviews

The Physician's Visiting List, 1914. Sixty-third year of publication. Philadelphia: P. Blakiston's Son & Co.

These lists may be obtained for 25 to 100 patients weekly, and range in price from $1.25 to $2.50. They are most excellent in arrangement and contain in addition much information often required in emergencies.

Materia Medica Notes. By James Whitla, L.R.C.P. & S., L.P.S.I. Price, 2s. 6d. Edinburgh: E. and S. Livingstone.

Medical students will find in this small volume an easy, practical and concise arrangement for study of the subject of materia medica. It is divided into Drugs and their actions; Galenical preparations; Chief therapeutic agents, with preparations.

International Clinics. Volume III. 23rd series, 1913. Philadelphia, London and Montreal: J. B. Lippincott Company.

The major part of this volume is taken up with most excellent papers on Diagnosis and Treatment. There are others on Medicine, Surgery, Medico-legal and Electro-Therapeutics. It is profusely illustrated and has two colored plates. International clinics offers probably the best means to the busy practitioner to keep pace with the advances in medicine.

Special Fracture Number. The American Journal of Surgery will present in January an issue of their journal devoted exclusively to fractures and their treatment.

The following subjects will be presented by acknowledged authorities in this special branch of surgical work:—"Astragalus Injuries," by F. J. Cotton, M.D., Boston, Mass. "Diagnosis of

Fracture," by Lewis A. Stimson, M.D., New York. "Position in the Treatment of Juxta Epiphyseal Fractures at the Hip and Shoulder," by Fred. Albee, M.D., New York. "A Splint for Maintaining Nail Extension During Transport," by John C. A. Gerster, M.D., New York. "Fracture of the Skull: Roentgen Ray as an Aid in Its Diagnosis," by W. H. Luckett, M.D., New York. "Vicious Union," by James K. Young, M.D., Philadelphia, Pa. "The Immediate and Remote Results of Fractures of the Skull and Spine," by Chas. Elsberg, M.D., New York. "Conservation in the Treatment of Fractures," by Wm. L. Estes, M.D., So. Bethlehem, Pa. "Some Phases of Fracture Treatment as Based on Hospital Experience," by E. S. VanDuyn, M.D., Syracuse, N.Y. "The Treatment of Fractures," by E. P. Magruder, M.D., Washington, D.C.

Annals of Surgery. Philadelphia: J. B. Lippincott Company.

The December, 1913, issue of *The Annals of Surgery* is a special anesthesia number, and contains no less than twelve papers on various subjects. In addition, there is a supplement of over 100 pages, consisting of papers read at the first annual meeting of the American Association of Anesthetists. The price of the *Annals of Surgery* is 50 cents a single number, or $5.00 a year. Canadians may order through Mr. Charles Roberts, Canadian representative of Lippincotts', Unity Building, Montreal.

Some Papers from the Research Laboratory. Parke, Davis & Co. Detroit, Mich. Reprints. Vol. I. 1913.

In various medical journals, from time to time, during the last two years, have appeared papers setting out the scientific work performed at the Laboratories of Parke, Davis & Co. These are now collected into a volume of 287 pages, and will be found of inestimable value to scientific members of the profession. As the volume is one many will wish to preserve as a record of advanced, authoritative and recent thought and observation, we would suggest a more substantial binding. Reports of this class are too apt to be treated as transient literature when issued in thick paper covers.

Dominion Medical Monthly

And Ontario Medical Journal

EDITED BY

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COMMENT FROM MONTH TO MONTH

Medical Inspection of Public Schools, so far as it is being conducted in Canada, is, according to the last annual report of the Special Committee on Medical Inspection of Schools of the Canadian Medical Association, further advanced in British Columbia than in any other province of the Dominion. There it is prosecuted under the guidance and supervision of the provincial board of health.

Its prime object from the viewpoint of the public is the detection of infectious and contagious diseases and indirectly the prevention of these amongst other pupils. But it has an additional object, namely, the securing of a higher physical development and educational results.

Its appearance has resulted in two schools of thought as to its proper administration, namely, the health authorities on the one hand, and the educational authorities on the other.

That the work should be administered either by the health or educational authorities universally and not sectionally or locally seems clear; and in Ontario the Legislature should at once decide whether this work should be carried out for the whole province

by either the Board of Health or the Department of Education. It is surely going it haphazard to allow local boards of health or of education to prosecute it at their own discretion.

Toronto is one city which adopted this work under the direct control of the Board of Education; but at the present there is a well-defined movement to have it transferred to the Health Department of the city.

For many years to come it would appear that the detection of infectious and contagious diseases, the detection of physical defects and the prevention of disease, will constitute the major part of medical inspection; and but little can be expected in the way of education leading up to higher physical development.

At present the work would appear to lie far more within the sphere of the medical officer of health.

What the taxpayer, however, should know at the present time is the value he is getting for his money. To what extent has medical inspection of schools in Toronto, for instance, lessened the incidence of infectious and contagious diseases? Has there been, in the past three years, a considerable falling off in these diseases?

These are vital statistics; and the community is entitled to know from its health authorities what great good has been accomplished in this direction.

Equality of Income is the panacea put forward by Mr. George Bernard Shaw as the socialistic cure of humanity's ills. Mr. Shaw is too modest—no, Mr. Shaw is never modest where Mr. Shaw is concerned—he is rather indisposed to enunciate or elaborate his scheme, until the principle thereof is approved and adopted.

In some vocations of life equality of income already pertains, as for instance, soldiers in the ranks, policemen, etc. It would be only necessary to extend this from class to class, and then equality of income would do away with all class.

Just how this would work out in the medical profession wherein a real average income would prevail is interesting to inquire. The $100,000 income practitioner would have to get along on much less, while the $1,000 income man would be very pleased to get along on the added increment. The former would be compelled to keep right on with his major operations, while his less fortunate confrere could daddle along in a go-as-you-please style which would bring in annually as many golden eagles to one as to the other.

As there are far more poorer physicians than rich ones, if the matter ever came to a vote, equality of income would be sure to carry the day in the medical camp. Probably in the approaching dawn of this embryonic Utopia, the medical profession may yet have something for which to thank Mr. George Bernard Shaw, although they have not had much in the past.

For long years the medical profession has been kind to the poor, but under Mr. Shaw's plan there would be no poor and medical charity would cease to exist. The medical profession would be shorn of this great humanitarian principle.

Much as they pride themselves upon this altruistic principle, the medical profession would welcome the day when the State came to recognize its responsibility to all its subjects, not alone in medical charity, but in all forms of charity.

One might hesitate to hail Mr. George Bernard Shaw as a coming saviour of mankind; but the proposition he has advanced savours of a humanitarian spirit which should be applauded.

RESULT OF FINAL EXAMINATION OF COLLEGE OF PHYSICIANS

The following candidates have passed the final examinations of the College of Physicians and Surgeons of Ontario: William MacDonald Adams, Toronto; Harold Bell, Collingwood; Wilfred Andrew Thomas Bodkin, London; William Alfred Costain, Brantford; Lawrence Edmond Crowley, Kingston; Arthur Des Rosiers, Rockland Charles Francis Dunfield, Petrolia; William David Ferguson, Hamilton; Anthony James Flood, Delta; Grattan Clifford Graham, Fenelon Falls; Richard Alfred Ireland, Trenton; David Campbell Irwin, Ottawa; Warren Frederick Lockett, Kingston; Herbert Kent Manning, Toronto; George Robert Miller, Owen Sound; Finlay Munroe, Maxville; Archibald McCausland, St. Thomas; Claude Andrew McClenahan, Milton; W. L. McIlwraith, Woodstock; James Franklin McLay, Woodstock; Charles Ernest McLean, Athens; Edmund Morell Alexander Oldham, Chatsworth; William Albert Scott, Langham, Sask.; Charles Edward A. Trow, Toronto; Donald Alexander Warren, Hamilton; Fred Earlby Webb, Aurora; Arnold Lorne Wellman, Harold; Louis Edwin Williams, St. Thomas.

Editorial Notes

THE SOCIAL EVIL

(Int. Med. Congress.)

Members of the combined sections of Dermatology and Forensic Medicine met in Albert Hall, in order to discuss the dangers of the scourge in connection with which many leading doctors have recently been urging the Government to appoint a Royal Commission. Sir Malcolm Morris, one of the signatories to the manifesto to the Government, occupied the chair.

Professor Dr. A. Blaschko, Berlin, who opened the discussion, urged that State laws in reference to the infection were indispensable. The so-called regulation had not proved an active means of diminishing venereal diseases in any country, chiefly because it did not include the most dangerous individuals. In place of regulation, a system of purely sanitary measures should be set up, which, recognizing that all sources of infection could by no system of supervision be excluded, should seek especially to make these most dangerous elements innocuous.

Such a system, for instance, as that already existing in Norway, should apply equally to both sexes, and should not officially label individuals or impose exceptional regulations, such as registration, inspection, and police control. While for most cases it would suffice to facilitate for all citizens opportunity of treatment, it would only be necessary in the case of specially dangerous classes, the youthful, the weak-minded, and the depraved to institute measures of compulsory education.

Professor Dr. Ernest Finger, Vienna, was in favor of measures being taken for the education of youth showing the dangers of syphilis, and also of the education of diseased persons themselves. Treatment, he said, should be made as easy as possible.

"Preventable Misery."

Dr. W. A. Brend read a paper prepared by Major H. C. French, R.A.M.C., which dealt mainly with the subject of State control. The question of venereal diseases, he said, must soon become crucial in Great Britain under the insurance scheme, and in time they must become notifiable by reason of the heavy cost to the State, apart from all other considerations. Those diseases cost the country millions of pounds; they filled many homes with preventable misery,

they overcrowded our workhouses, prisons, and lunatic asylums with imbeciles, idiots, criminals, epileptics, and other insane persons; they sapped the vigor of the nation, and if uncontrolled might eventually endanger its very existence.

Coming to the important question of prophylaxis, there were two essentially different modes of State intervention. First, the system known as regulation, which implied registration and attendance. The second mode was to require doctors and others to notify all cases of actually existing disease in persons in whatever class or sex to the health authority, who inquired into the means of segregation and treatment (as in the case of other infectious diseases), and was empowered to remove the patient to hospital if necessary. In the case of poor persons this implied a certain outlay for hospital accommodation and food, but it repaid the State a hundredfold.

Some essential principles in the control of the scourge culled from twenty years' practical experience in many countries were as follows: Confidential medical notification of disease on prima facie evidence and medical treatment for short periods in the early activity; contagious stages of disease; the effectual control of openly practised prostitution by the localization of irreclaimable women into certain areas or streets; the rigid suppression of souteneurs; the suppression of loitering and solicitation in the streets; the provision of free voluntary dispensaries for certain classes; the control of diseased merchant seamen, who spread the worst form of disease at seaport towns; punishment by fine or imprisonment for concealing disease; the marriage of diseased persons discouraged by law under ten years from date of contracting the disease.

Experience in Other Countries.

Such measures might not completely deal with this difficult social problem, but they were the condensed experience of practical work as opposed to theoretical considerations. They were the bed rock on which an adequate superstructure could be laid. They did not conflict with public morality, but minimized disease, misery and death. That the disease could be effectually controlled in a community was fully exemplified by personal experience of the work in India, Egypt and Malta, but it was first necessary to get legal control in the manner in which smallpox and other much less dangerous diseases were controlled.

Professor Gaucher and Dr. Gougerot, of Paris, in a joint paper, suggested that the transmission of the scourge should be made a penal offence. They urged the re-education of fallen women, and suggested that the rights of a legitimate wife should be accorded to

the victim of seduction, while a lover who deserted a mistress should be liable to punishment, either penal or pecuniary. Protection should be given to young girls by after-school education through the institution of workroom instruction, and earlier marriage should be encouraged.

Professor Dr. Erik Pontoppidan, Copenhagen, said that, despite the laws in force in Denmark, medical men would not act as police inspectors. They desired to keep the confidence of their patients, and would only put the powers they possessed in force in particularly dangerous cases. If the law was severely enforced it would mean that the patients would not go to the doctors.

The part of the law in Denmark which had worked well was that which went in the direction of enlightening the patients about the disease and the risk of contamination. The improved facilities for hospital treatment had also been useful. He was opposed to a system of notification, but approved of systematic provision for the diagnosis and treatment of disease.

Need of Lecturers.

Dr. Douglas White, London, said that, in spite of the fact that we had not a policy of regulation in this country, the disease was not more prevalent here than in Continental countries. It did not follow, however, that there was nothing to do. In this country there were not fewer than 500,000 fresh infections of venereal disease every year. If they were to grapple with the problem they must do so as a whole. It was a social problem as well as a medical one.

Personally, he was of opinion it was no use to apply compulsion. (Cheers.) Compulsion led to concealment, and concealment was the one thing to avoid. The most important thing was to get the patient to come for cure early. What was required were beds in all the general hospitals for the treatment of the disease, and a special medical department. Supposing that was done, would the people come for cure? He believed they would come more readily than was expected. The only thing that would prevent them was ignorance, and that ignorance must be combatted by education.

He wished to see lecturers appointed to go round the secondary schools and colleges in order to teach people the dangers of disease, and the value of confidence.

With regard to notification, he considered it desirable that they should have statistical information. He did not see how they could get much progress without it, but the notification should be confidential and for statistical purposes only.

Remedial Measures.

Mr. Ernest Lane, senior surgeon to the London Lock Hospital, considered that the day for compulsion was dead, the era for repressive measures was past. The two remedial measures were education and treatment—education of the public and education of the medical profession. If boys at public schools were given some elementary knowledge of the possibility of disease he believed its incidence would be modified. In each hospital there should be a special department set apart for the treatment of these diseases, as facilities for treatment would certainly modify them.

Dr. Helen Wilson (Sheffield) was in favor of facilities for treatment being provided before asking for notification.

Dr. Woods Hutchinson (New York) said they had had six or eight months' experience of notification in New York, and he was strongly in favor of it, for one reason, because it ensured proper treatment.

The Chairman proposed the following resolution:

That, sensible of the ravages wrought by syphilis in the health of the community, and deploring the inadequacy of existing facilities for checking its dissemination, the International Medical Congress calls upon the Governments of all the countries here represented—

1. To institute a system of confidential notification of the disease to a sanitary authority, wherever such notification does not already obtain.

2. To make systematic provision for the diagnosis and treatment of all cases of syphilis not otherwise provided for.

They all hoped, he said, that the appeal that had recently been made to the British Government for a Royal Commission would not fall on deaf ears. Confidential notification was the pre-requisite of any effective action by the State to check what Lord Morley characterized as "this hideous scourge." The ease with which the disease could be communicated, the enormous number of those who were its innocent victims, the inadequacy of proper means of treatment, were facts of which the general public were almost entirely ignorant, and they were most imperfectly appreciated even by legislators.

An end must be put to the silence in which this subject had too long been shrouded. Local authorities were encouraged to build fever hospitals, and in a thousand ways the State stretched out its long arm to safeguard the health of the community, but it did not lift a finger to protect the nation from this devastating pestilence, which more ruthless than the Destroying Angel smote the unborn babe.

When the first part of the resolution recommending confidential notification was put to the meeting a number voted against it, though it was carried by a considerable majority. The second part was agreed to without dissent.

SURGICAL SUGGESTIONS

A peritonsillar abscess can be opened almost painlessly if the line of incision in the mucous membrane, and the tissue beneath, are infiltrated with an anesthetic solution injected with a syringe just as one anesthetizes the skin.—*Am. Jour. Surgery.*

Overcrowded Street Cars.—From the *Bulletin* of the Department of Health of the City of Louisville, Ky., for November 15, 1913: A street car crowded to its greatest capacity, all the seats occupied, the aisles jammed with people clinging to straps, swaying against each other, many of them coughing and sneezing, is exceedingly dangerous to the public health. Under such conditions the air breathed is filthy and germ laden from diseased throats and lungs and head colds in active stages. One or two small ventilators, even if always open, are not sufficient.

All that is necessary to improve this condition is to put more cars on during the rush hours and allow only a certain number of passengers to each car. They should not be allowed to stand in the aisles. In most of the cities in Europe the street cars are plainly marked with the seating capacity of the car. When the car contains this number of passengers no more are taken. If European city governments have fully and effectively succeeded in regulating their street car accommodations, why can not we do it in Louisville?

News Items

Typhoid fever claimed 483 in 1912 in Ontario.

Dr. N. M. McNeill, Prince Rupert, B.C., has left for Europe to do graduate work.

Dr. Grain has been appointed Medical Superintendent of Manitoba Indian Reserves.

The total number of illegitimate births in Ontario in 1912 was 1,256; in 1911, 1,087.

Dr. G. C. VanWart, Fredericton, N.B., has returned from the Clinical Congress at Chicago.

The Montreal Maternity Hospital treated 1,243 patients during the year ending Sept. 30th, 1913.

Tuberculosis declined in 1912 in Ontario. There were 1,168 deaths in males and 1,082 in females.

Dr. Chas. A. Webster, professor of anatomy at Beirut, Syria, has terminated his furlough in Toronto.

The deaths from cancer continue to increase in Ontario. In 1912 they numbered 1,778, as against 1,602 in 1911.

Hon. Dr. W. H. Montague, Winnipeg, has re-entered politics as Minister of Public Works in the Manitoba Government.

Of thirty-five candidates taking the fall examinations of the British Columbia Medical Council, twenty-three were successful.

Mr. John Ross Robertson, Toronto, has donated $10,000 towards furnishing the new wing of the Hospital for Sick Children.

Dr. Howard Coulthard, Vancouver, formerly of Toronto and Rossland, B.C., is visiting the hospitals in Chicago and other eastern cities.

Dr. F. X. McPhillips and R. E. McKechnie, Vancouver, have been appointed members of the board of governors of the Clinical Association of North America.

According to the second annual report on the medical inspection of public schools in British Columbia, of 29,774 children examined, 16,774 were unvaccinated.

Dr. W. H. Ross, Acting Superintendent of the Byron Sanitarium at London, Ont., has been sentenced to serve twenty-one months at the Central Prison, Toronto, for bigamy.

Dr. John M. Dee, Stamford, Niagara Peninsula, died Dec. 2nd, aged eighty years. He had been there and resided and practised there until the time of his death.

Dr. F. J. Doherty, formerly of North Toronto, is located at Port Coquitlam, B.C., where he has recently been appointed coroner, and is interested in a private hospital in that city.

Dr. L. C. Prevost, Ottawa, one of the capital's leading physicians, died Nov. 6th, at Saranac Lake, of tuberculosis. He was sixty-two years of age, and had been for many years Sir Wilfrid Laurier's physician.

The late Eugene O'Keefe, Toronto, left $3,000 to the Hospital for Sick Children; $5,000 to the Toronto General Hospital; $5,776.38 to St. Michael's Hospital, and the Hospital for Incurables, $2,000.

Dr. Geo. D. Porter, Secretary of the Canadian Association for the Prevention of Tuberculosis, is conducting a winter campaign against tuberculosis in Northern Ontario under the auspices of the Ontario Board of Health.

Dr. Oskar Klotz, professor of pathology and bacteriology, University of Pittsburgh, gave an address before the Academy of Medicine, Toronto, Dec. 2nd, on: "The Triple Alliance—Heart, Kidney and Arterial Disease."

Dr. Louis Laberge, for upwards of twenty-eight years Medical Officer of Health for Montreal, has resigned owing to ill-health. Dr. J. E. Laberge, who has been connected with the health department for twenty years, is mentioned as his successor.

Infant mortality in Montreal is double that of any city in America. In 1912 there were 4,835 infant deaths as compared with 1,534 in Toronto. The rate per thousand of the population in the last three years was 9.2, while in Toronto it was 3.6.

Dr. John L. Bray, Registrar of the College of Physicians and Surgeons of Ontario, opened the new wing of the Chatham (Ontario) General Hospital, on the 1st of December. Dr. Bray gave a history of the hospital from its inception twenty-three years ago.

Dr. L. N. MacKechnie, Port Officer at Vancouver, has received orders from Dr. F. Montizambert, Director-General of Public Health, to make a careful inquiry as to the prevalence of bubonic plague infected rats in Seattle and Tacoma, with a view to any chance introduction of plague into British Columbia.

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Original Articles

THE PROBLEM OF HOUSING OUR WORKING PEOPLE

P. H. Bryce, M.D., Ottawa.

It is apparent that in any question of housing or providing men with a dwelling, especially in a climate like that of Canada, the land on which such habitation is located becomes a necessary factor. It is further apparent that whenever land in relation to population becomes limited, it has a value wholly different from that over which nomadic tribes roam, or where it has been so abundant that governments, upon the condition of occupation and cultivation, grant homesteads of 160 acres, or, as in Alberta, double this amount. Being however limited, it is spoken of as a *natural monopoly*, and immediately assumes an ethical importance when it raises the question of whether or not every human being has a right to such an amount of it as will provide a subsistence for him, provided he will cultivate it or give it his labor. Probably there is no economic question which, owing to the hitherto illimitable areas of uncultivated land, has received so little attention until recent years by the people of this continent as that of the essential qualities inherent in land ownership. As unoccupied land or those vast areas, which served only as a hunting ground of savages, had no value, so it has been where the growth of population in a country, and especially in towns, has concentrated that its essential character of a natural monopoly becomes apparent. That it has not, however, changed in essence, but takes on a value only through human energy applied to production either directly to the land or by industries, which utilize the materials produced from land, is apparent, and the amount of this value determines whether or not it is an unearned increment according as the occupiers of the land are producers of wealth or the fortunate holders of land, which through accident of location has been favorable for the establishment of a town community. When

we learn that a quarter of an acre of land at the corner of two business streets in Chicago was worth only $2,000 in 1830, and in 1894 was valued at $1,250,000, we can realize that its owner possesses the unearned increment, since this value equals 4,000 years' labor at $1.25 per day. But we do not require to go to Chicago to find illustrations of land values taking on a phenomenal increase, since in the city of Ottawa we find with a population of 100,000 concentrated on 4,984, that some hundreds of acres of suburban land are being held, in some cases five miles from Sparks and Elgin corner, at $500 to $1,000 an acre, and small lots of 25 feet frontage, or 1-16 of an acre, are held as high as $400 in every outer ward of the city, or at $6,000 an acre. When we inquire what has made such prices, I shall not say values, we say:

1st. Increase of population.

2nd. The limited areas of land within a certain radius creating a natural monopoly.

3rd. The assessment of such lands below the prices at which they are held.

4th. The laying of taxes upon houses and improved property, or upon the energy or capital of producers.

5th. The ability of holders of such lands to pay taxes through, in many cases, the high rentals they are obtaining from houses crowded upon small lots and from the overcrowding of rented houses by as many as 829 persons being crowded into 56 boarding-houses containing 354 rooms.

Hence it at once becomes plain, before we attempt to deal with the questions of houses and of overcrowding, that we must in some manner solve the problem of land values, since it is idle to speak of model workingmen's houses if the value of land or the cost of building materials, upon which rents are based, prevent new houses being constructed, or at such cost as to make rents prohibitive.

Land is the one kind of property about which persons and parties of every kind have discussed and disputed and economists have theorized; but the one element which makes it unique and places it in a category by itself is that *it is not a product of labor.*

The growth of population, especially the building of railways, the general accumulation of wealth through industries and the development of social law and order, are the chief elements causing the growth of land values, and these have to a degree never before experienced been operative in Canada during the past ten years, while the benefit to holders of land in cities and the injury to those not holding it have both been made especially apparent.

In the beginnings of society the community had common possession of the land, and only as it became more valuable did the more energetic, industrious and powerful become possessors of it; but in the earliest known codes, as that of King Hammurabi of Babylon, 2250 B.C., the common right of the people to the land is recognized, since the duty of the holder, whether as owner or occupant, of any of the irrigated and intensely cultivated land in the delta of Babylon is set forth in the words of Ordinance No. 42: "If anyone takes over a field to till it and obtains no harvest therefrom, if it be proved that he did no work on the field, he must deliver grain just as much as his neighbor raised to the owner of the field." On the other hand, and beautifully illustrative of how the capitalist and money-lender even under our laws in Canada become the possessors of land, is the story in the 47th Chapter of Genesis, of how that earliest and greatest of all the fathers of trusts, Joseph, operated in the land of Egypt. We are told that after he had taken all the people's money for food and then their cattle they again came to him offering their lands and their bodies for corn. In verse 19: "So Joseph bought all the land of Egypt for Pharaoh; for the Egyptians sold every man his field because the famine was sore upon them; and the land became Pharaoh's. And as for the people, he removed them to the cities from one end of the border even to the other end thereof." "Then Joseph said unto the people, 'Behold, I have bought you this day and your land for Pharaoh.'"

So this benevolent agent of the Pharaoh took the land, gave the people seed to sow, and thenceforth *tied* the people to the despot by a statute concerning the land of Egypt until this day that Pharaoh should have the fifth.

In order to get some idea of the distribution of population the table may be given of births by wards during the six months from November 1st to April 30th:

Rideau Ward	47
Ottawa Ward	91
St. George	*75
By Ward	48
Central	94
Wellington	106
Dalhousie	†225
Capital	121
Victoria	95
Total	902
Total from two institutions	349
Grand total	1,251

*Also 229 Maternity Hospital and Salvation Army Home.
†Also 121 Misericordia Hospital.

Turning to our problem in Ottawa, I have obtained from the reports of several departments at the City Hall figures which supply us with materials for investigation.

No.	Ward.	Pop.	Acreage.	Persons per acre.	Children between ages 5 and 21.	Per cent. of Pop.
	Ottawa	95,570	4,984	19.1	23,922	25.0
1.	Victoria	7,554	651	11.6	1,895	25.0
2.	Dalhousie ..	17,292	1,096	15.7	4,897	28.8
3.	Wellington .	13,571	325	41.7	2,857	21.0
4.	Central	12,937	424	30.5	2,033	11.0
5.	Capital	10,376	1,164	8.9	2,845	27.4
6.	St. George's.	12,792	572	22.4	2,848	22.2
7.	By Ward....	7,863	202	38.9	2,271	28.7
8.	Ottawa	9,946	228	43.6	3,010	30.2
9.	Rideau	3,239	322	10.0	1,176	36.3
Other Cities:						
	Glasgow ...	784,496	12,688	60.1		
	Liverpool ..	.....	....	45.0		
	Sheffield ...	.....	....	19.0		
	Edinburgh ..	.....	....	29.0		
Percentage of population of Glasgow:						
	5 to 20 years			29.7 per cent.		
	0 to 5 years			11.24 per cent.		50.5
	20 to 25 years			9.58 per cent.		

The city area contains 4,984 acres, divided into nine wards, upon which are distributed 100,000 persons. The tables show, however, that the density of population per acre varies very greatly, there being 10 persons per acre in Rideau Ward, 43 in Ottawa Ward, and 41 in Wellington Ward. It might naturally be assumed that the character of the population of these several wards would be much the same, but examination discloses quite remarkable variations in the percentage of distribution by ages. Thus the number of persons between the ages of five and twenty-one years for the whole city is 25 per cent. of the total, but in Rideau Ward the percentage is as high as 36.3 per cent., while in Central Ward it is as low as 11 per cent. I have not been able to obtain an absolutely exact statement of the number of houses in each ward, but roughly they are as follows:

Ward.	No of Houses.	Persons per House.
City	180,023	5.4
Victoria	1,463	5.1
Dalhousie	3,547	5.6
Wellington	2,494	5.4
Capital	2,427	4.1
Central	2,031	6.37
St. George	2,292	5.5
By	1,400	5.6
Ottawa	1,797	5.3
Rideau	572	5.6

An analysis of the table shows some curious variations. Thus the total population to a house is low in Capital Ward, it being better by 130 compared with standard 5.4 to the average house. Again, Central is worse by 13—or 87 compared with 100 if taken as standard. The other wards do not greatly vary; but if we take the highest, Central Ward, compared with the lowest, Capital, we have a difference of over 50 per cent. As both have better class houses, we must find the explanation in the fact that many of the population in Central live in apartments. Such figures fail, however, to give us the essential details of the number of rooms to a house. Thus, if a ward had only cottages and another had three-story houses, it is plain that crowding might be three times as great in the former as in the latter, if rooms were counted, and yet there would be no more houses to a ward. As an illustration of the effects of overcrowding may be given the study of fifteen houses, where one or more tuberculous patients were during the past year under the supervision of the Association for the Prevention of Tuberculosis. In seven of these houses the mother was sick, in five the father was sick, while the remainder were children of families. In all there were 117 persons in 86 rooms, or an average of 1.3 persons to a room. The character of the houses may be judged from the fact that in six of them there was no cellar, five of them were tenements, and in one case, where there were six persons, the front room was used as a grocery, and another house had boarders.

A further complication of the question of the number of persons to a house rests in the fact that an unusual number of apartment houses are to be found in Ottawa. I have not the total, but their number may be judged from the fact that during the past nine months permits for twenty-three (23) apartments were issued, as compared with forty-four (44) for double houses, and 228 for single ones. It will be apparent, when 20 tenements to an acre and ten families and more to a tenement, or over 600 persons to an acre are found in New York tenements, that house congestion may exist in a ward where there is much vacant land, while in a ward having houses on large lots the whole area may be occupied and yet not have a large population per acre. Again, another ward may be occupied with houses of two stories on many small lots, while the persons per acre may be large. The houses need not necessarily have a congested population, although it is probable that some of such are liable to be so. A comparison of Wellington with Ottawa Ward illustrates the possible difference

since we find an almost equal density per acre, and yet the proportion of persons between 5 and 21 years varies between 21 in the former and 30.2 per cent. in the latter. Enquiry shows that in the case of Wellington Ward there seems to be a large number of grown persons, probably employees, both young men and women, living in apartments and boarding-houses, while in Ottawa Ward there is a large family population with many children. The type of the population illustrated in Wellington Ward is accentuated in Central Ward, which is probably explained by its being the oldest of the wards occupied with houses of well-to-do citizens who have resided many years in the city and whose families are grown up, as well as by its having many apartment houses. The remarkable percentage of persons between 5 and 21 years in Rideau illustrates the presence of an area occupied almost wholly by houses, mostly single houses, having in them young families, and presents in its small population per acre an example of a normal suburban development. The abnormally high percentage of persons between 5 and 21 is in fact, however, explained by the presence of an orphanage having yearly in it some 200 infants. Now the study of these figures would be incomplete for our purpose were we unable to indicate their bearing upon the health of the occupants of houses. In the absence of an accurate house census this becomes difficult, but I have been able, through the kindness of our Medical Officer of Health, to give the death rate by wards for the first six months of 1913. It is as follows:

Total Deaths in Ottawa from Nov. 1, 1912, to April 30, 1913.

Ward.	Pop. 1912.	Total deaths in 6 months.	Institution.
Ottawa	9,946	170	St. Charles Home and Water Street Hospital.
Rideau	3,239	57	36 from House of Bethlehem.
St. George	12,792	179	31 from Ottawa Maternity Hospital.
By	7,863	47	
Capital	10,376	31	Old Men's Home.
Central	12,937	97	St. Luke's Hospital.
Wellington	13,571	107	
Dalhousie	17,292	194	36 at Misericordia Hospital.
Victoria	7,554	16	

DEATHS BY WARDS IN OTTAWA FROM NOV. 1ST, 1912, TO APRIL 30TH, 1913.

Ward.	Under 6 mos.	6 months to 1 yr.	1 yr. to 2 yrs.	2 yrs. to 5.	Stillborn.	Total.
Rideau	33	3	2	0	5	43
Ottawa	22	6	2	3	12	45
St. George's	31	4	6	9	23	73
By	7	8	4	3	1	23
Central	7	0	1	1	3	12
Wellington	16	3	3	1	5	15
Dalhousie	50	10	3	5	19	87
Capital	11	2	2	3	5	23
Victoria	8	1	3	1	3	16
Total	185	37	26	26	76	350

But what congestion may mean is illustrated by the following figures of an investigation of 56 boarding-houses occupied mostly by foreigners and of the inmates of houses where cases of tuberculosis were:

56 BOARDING HOUSES WITH 829 PERSONS.

	No.	Occu.	Average.	Highest in a house.
(1) 5-room house	18	235	14	20
(2) 6-room house	19	279	15	23
(3) 7-room house	7	98	12	20
(4) 8-room house	7	127	18	50
(5) 9-room house	5	90	18	25

But how essential it is to study these death returns in detail is shown in the fact that in the population in Rideau Ward of 3,238 in 1912, a total of 57 deaths were returned for the six months from November 1st to April 30th. Of these, 36 were under one year, and exactly this number was returned from the House of Bethlehem. Only two other deaths, apart from five stillborn, were under five years, leaving 12 deaths only over this age. Taking all but 36 as the death rate for six months, we have 21, or 42 per year, or an annual rate of 14 per 1,000 in a population of 3,300, including stillborn, or 10.6 per 1,000 as normal for Rideau Ward.

Or again we may take as the type of a purely residential district of a high class both as to the class of houses and the type of the resident, what is known as Capital Ward. It has a population of 10,376, and a rate of 27.4 from 5 to 21 per 1,000. The total deaths returned for six months were 31 and 23 under 5 years. It has the Old Men's Home within it, which has some

thirty inmates, and had five deaths in the last half year. If the total deaths are doubled for the year we would have 62 in 10,376, or only six per thousand. Similarly the infant death rate per thousand is phenomenally low.

We have in the preceding paragraphs set forth some of the principles underlying the problem of housing the people, and have illustrated some of the facts relating to the problem as it exists in Ottawa. But ample illustrations from statistics have been given to show both the nature of the problems involved and the urgent necessity for a complete house survey being made in order that our people should know conditions as they actually exist and in what direction they must move in order to apply remedies for existing evils.

In the paper by Lawrence Veiller of New York, Secretary of the National Housing Association of New York, on "Room Overcrowding and the Lodger Evil," he remarks that:

"So far as the physical effects of room overcrowding are concerned we have at hand considerable information: The results of studies made in Great Britain and other countries showing the increased death rate, the lesser height and weight and the less developed physical condition of the children reared in one room than of those in two rooms, and similarly the less advantageous condition of those reared in two rooms than those reared in three rooms, and so on.

"It does not require scientific investigation nor special wisdom to realize that a higher death rate, greater industrial inefficiency and inferior physical condition will be found among the poorest elements of the community, who, because of their poverty, can only afford one room to live in, and that often the poorest kind of accommodation to be found in the city; that their children should compare unfavorably with the children of families whose economic position enables them to live in more commodious quarters is not a matter of surprise.

"May it not be that they live in one room because they are poor and weak, not that they are poor and weak because they live in one room?

"With regard to the civil effects of room overcrowding, we are on sure ground. The social worker is in a position to observe every day in the year the bad results from this kind of living, the serious effect it has upon good citizenship; how difficult it becomes for the person living under these conditions to have an interest in the welfare of the city.

"The bad social effects of this method of living are only too easily observed. It can hardly be called living; it is merely existence, and nothing more.

"My own belief is that our failure to remedy conditions heretofore has been due largely to the fact that we have not recognized with sufficient clearness that the lodger evil is the root of our room overcrowding problem.

"My solution for this evil, therefore, is that we hold the landlord primarily responsible for the taking in of lodgers into the apartments of families who occupy his building. While it may seem a novel proposition to hold the landlord responsible for something which many people feel he cannot be responsible for, yet it is in reality no new thing. For over ten years now in New York we have held the landlord responsible for the moral character of his tenants, and we have done this most successfully.

"What I propose now is that we should apply this same principle to the problem under consideration; that we should prohibit the taking of lodgers and boarders into an apartment without the consent in writing of our health officials, and that we should then hold the owner of the house responsible through heavy penalty for any violation of this provision. Let us not be deceived by any false claims on the part of the landlord that he cannot know what is going on inside the apartments of the individual families in his building."

As regards its solution, it must be apparent that there are several methods which enter into the problems as already outlined:

1st. The adoption of town by-laws for lessening present overcrowding evils through health authorities insisting upon the removal to other premises of those present in any house exceeding what may be deemed proper; but the difficulty attaching to this, as fully illustrated in New York and elsewhere, lies in the fact that there are few vacant houses for those to go to. Within ten years the population of Ottawa has increased from 60,000 to 100,000, and by 5,000 within two years. Can anyone say that, on the basis of five to a family, 1,000 houses have been erected in the city within this period? As a matter of fact the building permits show for the first nine months of 1913 the following: Single dwellings, 228; double dwellings, 44, and apartments, 23, which, roughly estimated, will provide for 2,000 persons. It is of interest to note that 130 permits during the same period were issued for workshops, offices, churches, stables, garages, etc. If

houses had not been built to such extent it is obvious that the increased population could not be forced out of existing houses.

2nd. What then is to be done? It is quite apparent that the solution for this must be found in one or two ways, either by the lessening of land values to a point making it possible for workmen to purchase land whereon to build, or by builders purchasing land and erecting houses which can be rented. If, however, this be adopted then it means that rents in keeping with the cost of land, plus that of the building and builders' profits, must be charged. Assuming, from the experience of the Model Houses Association two years ago, the minimum cost of land and house to be $2,000, even at six per cent. this means $10, or with taxes a $11 rental per month.

3rd. A third scheme is possible, viz.: the purchase of land outside existing subdivided areas by either private or company initiative or by the municipality at a lower price and then selling or leasing lots to purchasers on which to build houses, or by erecting buildings and selling or leasing at low rates as is done by the Sanitary Housing Company, Washington, D.C., whose charter allows only five per cent. to be charged in rentals on the actual investment.

Whatever scheme is selected, it is plain, however, as Prof. Eberstadt of Berlin, Germany, says, that "All our difficulties of housing in Germany spring from the price of land." "Building sites in Germany carry about four to seven times the price which is paid in England." "The inflation of land values in Germany is altogether an artificial one, and contrary to the laws of public economy." He further says: "My investigations, on the other hand, show that land may be turned into a monopoly, and therefore we have to shape our institutions to prevent this. I should, therefore, in case of a tax, propose that a duty be imposed, not uniform, but on a sliding scale, beginning with low rates and gradually rising with the price, thereby awarding, as it were, a premium to the owner selling at a fair price, and laying a charge on the owner selling at a high price. The high price of land in many German cities has resulted in what is called the Barrack system, or apartment houses for the working classes. On the other hand, in a notable number, some 300 cities own the large proportion of their land, and in these instances every facility is given for proper housing of the workers. Not only are loans granted for a considerable percentage of the cost at a low rate of

interest, but land is also sold or let at cheaper prices, always with rigid restrictions as to resale in order to prevent speculation."

To take an example, the city of Ulm has during the past twenty years bought 1,200 acres, or one-quarter of the area of Ottawa, and it is stated has in this land the foundation of that city's great expansion through continued low rates. As a matter of fact the profits made from the sale or lease of lands in many cities of Germany have enabled them to carry on municipal institutions almost without any direct taxing of the people.

We have in Canada one fortunate example of a city owning a portion of its own acreage in Regina. The city came into some 300 acres located north of the C.P.R. tracks through, I am informed, a tax sale. This land has been surveyed into blocks, its streets are graded and have water pipes and sewers laid, while parcels are being sold for purely business purposes at $30 a foot frontage to manufacturers on the condition of buildings being erected within a year under penalty of forfeiture. I learn that already the city has made $1,250,000 out of sales of land, collects taxes on this as on other property, and has reduced the town tax rate to 14 mills. The common basis upon which city land is leased in Germany is two per cent. interest of the actual value for sixty years, the city allowing from 30 per cent. to 100 per cent. of the improvement value at the end of this time to be retained. The city of Frankfort owns some 75 per cent. of its whole area or 6,000 hectares, and either directly or through co-operative loan associations advances money for building purposes at a rate of 3½ per cent.

We thus see that the economic principle of communal interest is there fully developed in the sense that it is realized that every dollar that is saved to the workman not only makes him more effective through being more contented, but also because he has more money to clothe, feed and educate his family and so maintain strength and health, and so loses less through sickness and is not a charge upon the municipality or charity. It does not matter much as to the method by which this end is attained, and in the western cities of Calgary, Edmonton and Vancouver the simplest system is adopted of placing the taxation on land values for municipal purposes and little or none upon improvements, and thereby simply and automatically regulating land values, since land unimproved becomes a loss to the owner and either forces a sale or improvements. But assuming that a city such as Ottawa proposes to look not only to the welfare of its present citizens, but

also to its future development, it is essential that some system be applied to its extension and at times to the re-adjustment of its existing plan or absence of plan. Already Calgary has engaged Mr. Mawson, an English landscape engineer, at £2,000, to plan its future extensions, while in Prince Rupert we see a city rising, where five years ago was a dense forest on a rugged mountain side, fully planned and laid out before a single lot was sold. We have then in Ottawa, as is apparent, two problems: the immediate one of supplying land at a moderate price for workingmen's houses and that of providing for the extension of the Capital of the north by securing outside areas at moderate prices and fitting them into the larger plan of what is by Nature and the promise of our future destined to be the central glory of Canada.

We have during the past two or three years, through the activities of the Garden Cities and Town Planning Associations of Great Britain, had different experts visit Ottawa and other cities of Canada and point out what is not only possible, but also what has been done in England during the past fifteen years. The three months' tour through Canada of Mr. Henry Vivian, M.P. for Birkenhead, Chairman for the Co-partnership Tenants Co., will be recalled. I found in the *Garden Cities and Town Planning Magazine* reference to this visit and to Mr. Vivian's address at the annual meeting of the Association, in which it is stated: "Many of those at the meeting were much surprised to hear of the appalling slum evils existing in some of the larger Canadian cities, described so graphically by Mr. Vivian." It is probable with the statistics already given regarding overcrowding in the foreign quarters that Mr. Vivian had some sections of Ottawa in mind; but whether this be true or not it is sufficient that we recognize them and their cause and endeavor to remove such opprobrium from our city. I have elsewhere referred to the phenomenon of the urban growth of Canada during the past decade of 62.5 per cent., while that of Ottawa for the same period has been quite this amount. Compared with such figures is the remarkable fact of rural Ontario losing constructively over 25 per cent. of her population during the decade. This forces upon our attention another factor dependent upon both these phenomena affecting our immediate welfare, namely, the remarkable increase in the cost of living as illustrated in the following table. It may be stated that wholesale prices were, as compared with the average between 1890-1899, taken as 100 for 272 articles:

Wholesale prices July, 1913.	135.9	Wholesale prices 1890-1899...	100.
" " Aug., 1912 ..	133.	" " Aug., 1913 ..	136.2

Individual items were:

Cattle and beef	177.9	Hog products	189.2
Sheep and mutton	139.6	Poultry	213.5
Dairy products	138.2	Fish	151.2
Breadstuffs	126.0	Dried fruits	163.7
Lumber	179.4	House furnishings	146.9
Furs	358.0		

Twenty years ago the inevitable degenerative effects of urban congestion in several Canadian cities where land booms had taken place were impressed upon me and strengthened by the remarkable studies of Charles Booth and others in British cities. It is now over fifteen years since Ebenezer Howard of London, England, became impressed with the demand for some method of deurbanization, and worked out the principle underlying the back-to-the-land movement exemplified in his book on Garden Cities.

As it has been in England that industrialism from the eighteenth century to the present has seen the largest and most extended growth and had produced earliest the evils of urban overcrowding and house congestion, so it has been there that the efforts to ameliorate or remove these evils have been most systematized.

The mediæval and now obsolete idea, crystallized in the Poor Law dating from Elizabeth's time, was that the evils were inevitable, and that the State should provide for the worn-out products of the system as for disabled soldiers. Later many sanitary by-laws for regulating the number of inmates and the sanitary condition of the houses followed; but not till the twentieth century have we witnessed the great evolution of the "social conscience," which is realizing in practical legislation the scientific means of preventing, rather than attempting to cure, slum conditions, which a *laissez faire* philosophy had permitted to grow up, and which we in Canada are already witnessing the fruits of.

The ideals set forth by Ebenezer Howard have been reduced to a practical form in the Imperial Housing and Town Planning Act of 1909.

Mr. Nettleford of Birmingham has in "Practical Housing" summarized very well both the scope and provisions of the Act.

He states the objects of Town Planning to be.

1st. To facilitate and encourage thorough co-operation between all concerned in the provision and supervision of accommodation for the people in order to provide town populations with the light, air and space essential to human health.

2nd. To ensure the exercise of foresight in reserving plenty of room, where eventually main thoroughfares will be required. To take into account everything that makes life worth living, to consider the surroundings of a house as well as the house itself.

Mr. Nettleford then sets forth the skeleton plan of the future town with its areas set apart for factories, warehouses, shops, playgrounds, public buildings, dwellings and public streets. The cost as shown by Ebenezer Howard, as by Mr. Nettleford of the land, primarily determines the rental; but many other things, as the narrower paved roads for residential streets with broad boulevards, will serve to lessen the cost. At Letchworth, Hampstead, and other Garden Cities, newly laid out on cheap land at some few miles from London, it is seen to be quite possible to have either semi-detached or separate houses at from six to ten dollars rental per month with every town convenience, while these cities bring the factories to the town instead of crowding the workpeople into poor areas on expensive land in cities, and supply in the public buildings and places of entertainment social advantages adequate for every legitimate need. Mr. Nettleford says "that in England at any rate healthy homes and cheerful surroundings cannot be provided at rents within the means of the poorer classes on land that cost more than £300 per acre." He says: "Millions of the poorer classes in this country are housed on land, the capital value of which is £3,000 per acre or more, and very large numbers of our town dwellers are living upon land worth £10,000 and over." It will be noted that the average small lot in Ottawa of, say, 25 by 100 feet, would mean sixteen houses per acre, which at $400 per lot would mean $6,400 per acre, as compared with the lot on the $1,500 or £300 acre in England. The Ottawa suburban lot thus becomes more than five times the price, and when the high cost of materials and labor is added it serves to explain largely the scarcity of houses and the high rents so frequently referred to in the press.

Nettleford makes the remark "These two national extravagances:

"1st. The unmethodical use of land and the destruction of the people's health are so large and at the same time so common that few people take any notice, and still fewer take the trouble to master the figures involved." Mr. Nettleford very admirably sets forth how this wanton waste may be stopped "by the introduction into public affairs of better organization and more co-ordination" in such items as:

(1) Reduction in cost of estate development.

(2) The bringing into the market of more land for housing purposes.

(3) Co-operation between local authorities and owners, and between land owners amongst themselves.

(4) The pooling and re-distribution of small plots of land.

(5) Harmony between buildings on adjacent sites.

(6) Prevention of evils instead of heavy compensation for their cure later on.

(7) The assistance of first-rate men in town planning with business experience.

Speaking of the end aimed at in town planning, the Hon. Alfred Lyttleton says in the case of the Garden City of Hampstead:—

1st. We wish in the first place to have pretty and wholesome dwellings, with gardens and open spaces of land.

2nd. We wish to have an orderly and well-designed plan of the estate so that each house may be placed with a regard to every other house.

3rd. We wish to make the life of the Hampstead suburb a life in which men shall have an understanding of each other, in which the poor will teach the rich, and in which the rich, let us hope, shall help the poor to help themselves.

I cannot do better than conclude my remarks than by briefly indicating how far the Government has gone in the Housing and Town Planning Act of 1909 in Great Britain. It is divided into four parts:—

I. Housing of the working classes.

II. Town planning.

III. County Medical Officers and Health and Housing Committees.

IV. Supplemental.

Necessarily they deal with municipal house building, slum reform, slum prevention, financial, general and rural. Amongst the several provisions are:—

1st. Part III. gives power to local authorities to buy land and lease it to building societies, which it may at the same time assist by laying out streets, sewers, etc.

2nd. The Act gives power to the municipal authorities to sell land and use its proceeds for developing streets and for town planning.

3rd. Schedule 1 simplifies procedure for the purchase of land by arbitration if necessary. This is by a single arbitrator appointed by the Local Government Board.

4th. Provision for long loans to municipal authorities by the Public Works Department of Government.

5th. Provides that by any four inhabitant householders applying to the Local Government Board, the Board can set up an enquiry into the housing needs of any municipality.

6th. If enquiry shows that a town improvement scheme is the best method of dealing with an insanitary area in any town, then the local authorities may carry out the approved scheme at the expense of the owners of insanitary houses, if proved necessary.

7. All new land leases and building permits provide that the same shall be constructed and kept in a sanitary repair by the landlord.

8th. Power is given local authorities to close any house unfit for human habitation and make reasonable recompensation for expense of moving to those turned out.

9th. The Local Government Board's decision as what land in any town planning scheme is likely to be used for building purposes is final as well as for removing buildings or obstructions in any such scheme, and to the local authority to purchase compulsorily.

10th. Compensation for injury to property in any such scheme may be given.

In this brief summary we see how the provisions of many old Acts dealing with municipal housing and sanitation have been enlarged so that individual citizens, the local authorities and the Government may each initiate action toward housing reform and town planning. It is much that in England, where the rights of the individual citizen have ever been upheld as the palladium of the people's liberties, these broad powers have become operative and that the restriction of the number of houses per acre, the provision for playgrounds for the children and open spaces for the people have, as Mr. Nettleford says, "captured the imagination of the British people, unimaginative as we undoubtedly are." A dozen garden cities have risen up at Bournemouth, Port Sunlight, Letchworth and Hampstead, and many times this number are being planned.

We in Canada are late in the field, because our urgent needs for comprehensive housing and town planning legislation have only recently become evident. It is with much satisfaction that we refer to the legislation enacted in three Provinces within the past two years—Nova Scotia, New Brunswick and Ontario. That of New Brunswick is an admirable Act, providing very well for the planning of new areas and for the even compulsory purchase by municipalities of land for town purposes. The town planning

scheme must first be initiated by the local authority, which when it makes an application to the Government must make out a *prima facie* case for its scheme, when the Governor-in-Council may authorize the municipality to adopt or modify any scheme submitted. While no specific reference is made to any provision for the municipality purchasing land for selling or leasing to individuals or companies for building purposes, yet the Act provides for the local authority appointing commissioners, to be approved by the Government, to whom it is to be delegated all the powers conferred under the Act upon the municipality, it is evident that a determined effort has been made to deal with the problem.

The Nova Scotia Act, while good, is not so ample or specific in its provisions as that of New Brunswick, but is nevertheless superior to that of Ontario, which, strangely, is made applicable only to cities over 50,000, it being quite forgotten that the time to plan, whether a house or a city, is when its foundations are being laid. I can conceive of nothing wherein an expert Government Board, whether Federal or Provincial, could do more toward the sanitary, economic or æsthetic future of our Canadian people than in having submitted to it the plans of any town at the stage when it begins erecting permanent structures, whether of stone, brick or cement.

As to the urgent demands which the figures given would seem to make upon the people of Ottawa for providing houses for its poorer people, it seems peculiarly appropriate that at the moment when the Federal Government has appointed a Town Planning Commission to study its æsthetic future, some committee of large-minded and large-hearted citizens should meet to not only discuss, but also to act in the matter of urging and insuring the purchase by the municipality as well as by private initiative of land whereon to begin construction, either by individuals or companies, of houses for the working people. Nowhere that I know of in Canada is there more wealth, directly the accumulation of the labor of working people, nowhere where employers come more closely into touch with their employees, and no where, I am sure, judging from our splendid charities, where there will be a more ready response if organized efforts to this end are made by a resolution requesting the Mayor to call a public meeting, at which the facts I have collected and many others can be made yet more public by selected speakers, with the hope that what has been discussed shall take an organized form, and Ottawa, if not leading, may at least be prominent in all which will make for the welfare of all her people and the glory of our capital city.

ERYSIPELAS

By Seward Erdman, M.D., New York.

Observations upon 800 cases of erysipelas (J. A. M. A., Dec. 6, 1913) in the wards of Bellevue Hospital, New York, which were under Dr. Erdman's care for an aggregate of forty-two weeks, during seven periods of service from February, 1909, to April, 1913, are set forth in this paper.

Erysipelas has had various forms of treatment exploited and lauded. In these 800 cases Dr. Erdman had specially in mind the determination of the average febrile period of the various forms of the disease.

In 500 uncomplicated facial erysipelas cases the average duration was 6.67 days; general body and migratory cases, fifty-six, 14.44 days; thirty-three leg cases, 10.88 days; two hundred and twenty-one complicated cases, including facial, body and extremity types, with some concurrent disease, average duration about two weeks. From this the author concludes: facial erysipelas is a self-limited disease, with an average febrile course of less than seven days.

In facial erysipelas the fever is generally high, from 102 to 104, remarkably remittent and irregular in type in the majority of cases, terminating by lysis. There were records of eight afebrile cases.

In adults males were affected 2:1. It is a disease mostly of the colder and spring months, the facial types being thrice as numerous in the colder months. A point of entry is favored in colds in the head with abrasion of the nasal mucous membrane.

There were 63 cases in infants under two years, or 8 per cent.; from 2 to 16 years, 1 per cent.; from 20 to 55 years, 88 per cent.

The facial cases, seven-eighths of all, showed the point of entry in the great majority in the nasal mucous membrane. More than 10 per cent. of the cases gave a history of previous attacks.

In the series of 800 cases there were ninety-three deaths, or 11.625 per cent. The mortality was highest in body cases, 50.0 per cent.

In the treatment of these 800 cases there was no internal treatment such as iron and quinine, except sedatives, stimulants and cathartics as might be needed.

Locally the routine treatment was the use of continually wet cold compresses. Beside each bed was a bowl of boric acid solution in which ice was placed, and cloths frequently moistened with the solution were continuously kept on the face.

In migratory cases in which there is involvement of the body, these wet dressings are not recommended, but occasionally ichthyol or picric acid solution is applied.

The use of phenol and mercuric chloride solutions are dangerous, and do not limit the spread of the lesion, and accomplish no more than plain water or boric acid. Ichthyol, which is the most widely used local application, does not give the patient as much relief as cold compresses, and besides it is dirty and not curative.

Vaccine treatment was used in ninety-five cases out of the 800, with eleven deaths, a mortality of 11.5 per cent.

Phylacogen was used in one season in twenty cases, with two deaths, or 10 per cent.

THE ACADEMY OF MEDICINE, TORONTO

At the December meeting of the Medical Section of the Academy of Medicine, the programme provided by the Fellows was a clinical one. The cases and reports of cases were all of special interest and brought out a good discussion.

Elephantiasis.

Dr. H. B. Anderson exhibited a case of Elephantiasis. This patient, a stenographer and unmarried, was twenty-nine years of age. In her previous history she had typhoid and malaria fevers, and at present she is troubled with headache due to eye strain. This case had been before the Academy, Oct. 7th, and at that time the statement of the case was that at fifteen years of age her ankles began to swell, and this enlargement had continued for the last fourteen years, until at the first exhibition before the Fellows of the Academy there was found a uniform swelling of the legs with no pitting on pressure and no puffiness. The swelling was confined to the lower extremities. One leg, the left one, was very much enlarged, its circumference at the middle of the thigh being 24 inches and circumference of the calf 23 inches, the right thigh 20½ inches and the right calf 19 inches. The swelling on both sides extended up to the groin. The blood examination was nega-

tive, no filaria being found either of diurna or nocturna variety. Also there was no eosinophilia.

On the treatment of rest, bandaging and the use of Thiosinamin, marked improvement was the result. In two months the measurements were reduced by a maximum of eight inches and a minimum of six. As a great deal of improvement took place before the administration of the medicine, probably by compressing the lymph from the lymph places, it was difficult to say how much of the improvement was due to the Thiosinamin. There is no doubt the case is due to filaria, but this parasite was not found in the blood.

Muscular Dystrophy.

Dr. Julian Loudon presented a case of muscular dystrophy. Relating shortly the peculiarities of the disease, Dr. Loudon said that muscular dystrophy was a disease of the muscles, differing from the spinal forms such as progressive muscular atrophy, and in children spinal muscular atrophy. The general characteristics of this disease to note are, first, the heredity; second, distribution of the atrophy; third, absence of fibrillary twitching; fourth, diminution in electrical excitability but no typical reaction of degeneration, this showing to faradism as well as to galvanism. The disease he classified under the headings:—

1. Simple atrophic. 2. Pseudo hypertrophic; here there is atrophy with the false hypertrophy. 3. Erb's Juvenile or scapular form. 4. Facio scapulo humeral form, where the muscles of the face, especially around the mouth, and sometimes around the eyelid, are involved. 5. Pelvic type. 6. Myotonia atrophica. 7. Transitional form. 8. Distal type.

A characteristic sign for diagnosis is that these patients, when arising from the recumbent to a standing posture, turn first into a prone position and drawing up the feet rise in that way. The gait is waddling and the pelvis is raised unduly. Also the gait is high stepping, and it is difficult for the patient to climb stairs.

The case presented was Erb's Juvenile form of the muscular dystrophy. She had no atrophy of the muscles in the lower extremities, and the ordinary superficial reflexes showed no change from normal. This young girl had three sisters married and quite healthy; three sisters younger than herself, quite healthy. She showed a marked lordosis and drooping of the shoulders, with weakness of the shoulder girdle. The protruding abdomen and waddling gait were features of the case. It was a case of congenital disease.

Lupus Vulgaris.

Dr. King Smith presented a case of Lupus Vulgaris. The patient, a female, had had lupus for nineteen years, and it now had progressed over a greater part of the lower right side of the body and upper right thigh.

Pemphigus Vegetans.

Dr. King Smith also reported a case of pemphigus vegetans which had presented difficulties in diagnosis. The patient was shown to the International Medical Congress. Some disagreed about the diagnosis, but Mr. Malcolm Morris called it pemphigus vegetans. The case was unique in that it had lasted seven years.

RADIUMTHERAPY

Angioma.

Dr. G. S. Young presented a case of Angioma which had not yielded to operation, but had been successfully treated with radium which Dr. W. H. B. Aikins had applied. This patient Dr. Young saw some nine months previous to the date of exhibition. He came to Dr. Young at that time with a growth that had been present for a number of years but now began to be painful. In the preceding seven or eight years this man had had two operations performed for the relief of the condition, but improvement was only temporary. The tumor, before radium treatment, projected about one inch from the surface of the face and extended over a large area. At the last operation this entire growth was removed, but it was not very long until it was as large, if not larger, than before. Inside of two weeks after radium treatment was begun the growth had markedly decreased in size, and the patient now is completely cured. The result was certainly spectacular. The treatment of this case was by the application of radium for forty hours and the injection of twenty-one hypodermics of radium salt.

Papilloma of the Mouth.

Dr. Aikins then presented a case which had been referred to him by Dr. B. Z. Milner. This was a young lady, Aet. 23, first seen in April, 1913.

In December, 1911, the patient had noticed a small lump in the upper gum on the right side. The lump became larger, and she consulted Dr. Milner in February, 1912, but not again until November, 1912, when Dr. Milner excised the mass and removed the wisdom tooth. The pathologist's report was a benign papilloma.

When the patient commenced treatment there was a mass of spongy tissue on the alveolar margin of the upper jaw, and also some on the lower. The tissue broke down very rapidly with bleeding. Under two applications of a tube of radium the papillomatous mass has disappeared and left a smooth healed margin.

This case illustrates very well the action of radium on ordinary warty growths. In the same way warts on the skin can be made to disappear readily and without discomfort.

Epithelioma of the Skin.

The patient was a man aged seventy-seven, referred by Dr. Chas. Foster in February of this year. About three years ago the ulcer appeared below the right ear. It increased in size slowly, and when the patient was first seen it was one and one-half inches by five-eighths inch in area. The edges were hard, thickened and everted and the condition was definitely epitheliomatous. The lower edge of the auricle was also involved. After three heavy exposures to radium, healing gradually took place and was completed in about two months.

Rodent Ulcer.

Mr. W., aged seventy-seven. An ulcerated lesion began about twenty years ago in the nasal fold of the left side of the face. When seen in April of this year it was one inch in diameter, with very thickened, hard, raised edges. The ulcerated part extended through almost to the mucous mebrane of the lip.

Various treatments had been used, such as cautery, caustics, ointments, etc. He had X-ray treatment seven years ago. Radium was used at intervals, and complete healing has occurred.

Dr. Aikins also gave lantern views of several cases he had treated:—

1. Angioma of the upper eyelid in a young infant, which caused considerable deformity. Within two months after the use of radium the mass had almost entirely disappeared.

2. A case of lupus vulgaris, which was referred by Dr. James Third, of Kingston, in May, 1911. The condition was of about ten years' duration. It began on the mucous membrane of the left nostril and gradually spread. Various treatments were used, as cauterization, electrolysis, X-rays, curettage.

In 1905 her general health was very poor, and the condition extended, and perforated the septum. Since then the skin at the alar margins had become involved, and shortly before Dr. Aikins

saw her nodules had appeared on the left cheek. The nose when first seen presented a most distressing appearance, the margins of the nostrils being covered with large unhealthy granulations. There was a free foul discharge from the nostrils. Very heavy destructive doses of radium were employed, and as a result the diseased tissue has been removed, and the nostrils now present a healed margin. The disease present inside the nasal cavity was treated by radium tubes, which were inserted into the nostrils. On the cheek the nodules present have cicatrized. The patient's general health is not very good, and close watch has to be kept over the condition for fear of a recurrence of the disease. The present local appearance is regarded as very satisfactory.

3. The patient, who had been referred by Dr. H. L. Anderson, of Niagara-on-the-Lake, Ont., in September, 1911, had an epithelioma behind the left ear, which had started some four years previously. At the date mentioned the area was as large as a fifty-cent piece, with raised, hard everted edges. The part was curetted under cocaine and a radium plaque with one lead screen left in position subsequently for twelve hours. When seen a month later there was still an area three-eighths of an inch in diameter, which had not yet healed, but was quite healthy-looking. The healing process continued, and the condition had remained satisfactory since then. Photographs were shown to illustrate the condition before and after treatment.

4. Lantern slides were given showing the results obtained by radium treatment in a very large nevus which caused great disfigurement. The patient was a young man. The skin of the face was of a deep purple red, studded with angiomatous nodules. There was considerable involvement of the lip extending through to the mucous membrane. On pressure the blood could be driven out to a certain extent but not entirely. The second photograph showed the result six months after radium treatment was begun. The nodular appearance has disappeared, the distorted lip was much improved, and the color had faded to a very considerable extent, so that the patient was more than satisfied with the result.

Progressive Muscular Atrophy.

Dr. J. H. Elliot presented a case of progressive muscular atrophy. The patient was one from Dr. Anderson's service in St. Michael's Hospital. Previous to this he had been compelled to give up his employment as a boilermaker because of weakness in his hands, making it impossible for him to hold and work the

compressed air riveter apparatus. An examination of this patient showed that he could not grasp firmly with the hand, and there was weakness of the muscles of the forearm and marked atrophy of the interossei muscles. The biceps and triceps muscles were also weakened, and in addition to the atrophy there were sensory changes. Tactile sensation was not lost, but very much altered. He could not distinguish readily whether he was being pricked with the head or with the point of a pin. When pinched, he felt it, but there was little pain. The sensation of heat and cold was practically lost. The most pronounced changes were in the distribution of the ulnar nerve. The most marked disturbance was in the right hand, the left being stronger and exhibiting very little atrophy. The left foot was weaker than the right, and both feet showed a partial anesthesia. There was no progress of the disease during the two months in hospital, but there had been no further loss of strength. There was no Rombergism present; the pupil reflexes were normal. The clinical picture is that of progressive muscular atrophy, but with the added sensory changes there is the question whether this is not a case of syringomyelia. The Wassermann reaction was negative.

Dr. London, discussing the case, said he had had opportunities to see the patient before the meeting and that this loss of sensation was not only to heat and cold but to all forms of sensation, therefore this could not be a case of syringomyelia. From the symptoms presented he would think of some peripheral lesion involving both the sensory and the motor sides. For example, it might be a case of cervical rib, and he would not care to say it was not cervical rib until an X-ray had been taken. If not cervical rib then he would consider it a case of syphilitic disease, but this seems to be ruled out by a negative Wassermann. The other disease one would think of was lead poisoning. He did not consider it a case of syringomyelia nor a spinal cord condition and it is not progressive muscular atrophy.

Dr. Graham Chambers asked whether the anesthesia corresponded to the peripheral type or to the central type. In reply it was stated that the anesthesia was distributed over both hands and both legs fairly equally, and on the right hand it was distributed especially over the area of distribution of the ulnar nerve.

Thoracic Aneurism.

Dr. J. H. Elliot gave the following history of an aneurism case and presented the specimen removed from the autopsy. A

man who had been ill three months came into St. Michael's Hospital because of pain in the chest. He was in the hospital some eighteen months and then died of hemoptysis. The post-mortem finding was an enormous dilation of the ascending arch of the aorta. During life there was no diastolic murmur, but there was a systolic one over the area of the aneurism. Death was due to perforation into the lower part of the upper lobe of the lung and hemorrhage into the lung. The clinical fact of interest is that he developed this enormous aneurism in three months' time. The Wassermann was positive and the X-ray showed the shadow of the tumor.

Hiccough.

Dr. Brefney O'Reilly reported a case of hiccough. This occurred in a female patient under treatment for cirrhosis of the liver. It was a very serious form, in which all the usual routine treatment proved of no value. When it seemed as if there was no hope and the patient was dying, the ears were searched and wax was removed. Since that there has been no return of the hiccough.

Asthma.

Dr. O'Reilly also reported a case of asthma caused by the presence of a parrot. Paroxysms occurred whenever the patient was in the same room as the parrot. She was completely relieved when the offending etiological factor was removed.

Dr. Fotheringham reported a case of asthma which was brought on as a result of eating strong cheese. When the cheese was prohibited there was no more asthma.

Dr. Marlow showed a specimen of a hard concretion which had been coughed up by a woman who had had asthma for eight years. During this period she was subject to paroxysmal attacks of coughing, and it was during one of these attacks that she coughed up this little calcerous substance one-half inch in length. These attacks had developed frequently, and after losing one of her false teeth, but she had forgotten about this until after she had coughed up this specimen. Dr. Elliott considered this a concretion formed in the lung itself and later cast off.

Dr. J. H. Elliott referred to a patient who had asthmatic attacks only when she went out in the wind. It was found that her attacks were due to emanations from horses.

Dr. J. F. TenEyck reported two cases of asthma, in each of which a cure was effected by change of place of residence.

THERAPEUTIC NOTES

Broncho-Pneumonia in Children. — Goldman (*N.Y.M.J.*) considers pneumonia cannot be cut short by drugs, and that good nursing is essential. Recovery depends upon previous condition of health, surrounding hygienic conditions, and causation—whether secondary to some other infectious disease or not. Support the patient's strength with nourishing diet, and let the temperature and pulse be the guides in employing stimulants. The ice pack will reduce the temperature in quick time. When there is mucous rattling with increased respiration and dyspnea and cyanosis, *keep* the respiratory centre alive. The heroic measure of plunging the child into a warm bath and then wrapping it up in a cold sheet, pouring hot and cold water alternately from a height on the patient's chest—Goldman has seen this do great good in causing the child to cough and expel the mucus.

Mammary Abscess. — J. A. Henton White (*Practitioner*) has had experience with pituitary extract in mammary abscess, and has found it useful. In a few minutes after injecting pituitary extract the flow of milk is much increased through contraction of the muscular fibres of the lacteal ducts. When the ducts contain pus and are blocked, this action is a useful one; and the author has seen, in two or three instances, a threatened abscess undergo absorption soon after injecting the extract.

Pneumonia. — Lindsay (*B.M.J.*, June 7, 1913) reports on one hundred cases of pneumonia. On any signs of circulatory weakness, strychnine hypodermically, and ammonia, digitalis and sometimes caffeine by the mouth. Alcohol was used in thirty-nine of the cases. It is only in the more serious cases alcohol should be used, and then sparingly and in moderate or small quantity. Brandy was the usual stimulant in doses of three or four ounces. Oxygen should be given where there is unusual dyspnea or cyanosis, the gas being passed through alcohol. In every case tepid sponging is vigorously practised, and cold sponging when indicated. Antipyretics, expectorants or bleeding was not em-

ployed in the series of cases. After the crisis all medication is stopped and the patient put on some tonic and a liberal diet. Lindsay has never used ice-poultices or ice-bags, a method of treatment not gaining in favor. As regards alcohol, Lindsay inclines to its use in moderate quantity in severe cases.

Retrodisplacement of Uterus. — J. M. Caballero (*Revue de Gyn.*) has applied the following technique in 350 cases and praises its advantages. The tip of the kinked round ligament he sutures to the fascia of the rectus after it has been brought up through a tunnel parallel with the farther end of each tube. By this method the uterus is left freely movable, so in a later pregnancy there is no disturbance; and there is no alteration in the direction of the uterus to the axis of the pelvis.

Controlling Hemorrhage in Thyroidectomy. — E. O. Jones (*Surg. Gyn. & Obs.*) has the following procedure: The usual transverse collar incision divides the skin and platysma. The upper flap is freed to the upper border of the thyroid cartilage. At a point opposite the middle of this cartilage the fascia over the vertical muscles is slit in a longitudinal direction, a finger's breadth inside the border of the sternomastoid muscle. The slit is extended upwards and downwards about two inches. The fascia of sternohyoid and sternomastoid is drawn outward, and the sternohyoid and sternothyroid muscles inwards with narrow-bladed retractors. The finger is pushed down through this space until the carotid is felt, and then, by blunt dissection the fascia just to the median side is penetrated and then the finger is in the loose areolar tissue in front of the longus colli. Then retractors with longer blades are substituted; and the sternomastoid and carotid sheath are drawn well outward while the vertical muscles and thyroid gland are displaced inward. Now the carotid tubercle should be located. About a finger's breadth below this the artery is sought with two pairs of blunt dissecting forceps. When a short arc is freed, a ligature is passed around with an aneurism needle. This is tied, and parts allowed to fall back to their place. The operation can then be proceeded with in the usual manner.

Reviews

Fellowship Examination Papers; Dental Examination Papers. Price, one shilling each. Edinburgh: E. and S. Livingstone.

The former is a compilation of papers for several years for the diplomas of the Royal College of Surgeons, Edinburgh; the latter for the diplomas of the same college, and the Royal Faculty of Physicians and Surgeons, Glasgow. Prospective candidates may study the gist of these papers with much advantage.

International Clinics. Vol. IV. Twenty-third Series, 1913. Philadelphia, London and Montreal (Unity Building), J. B. Lippincott Co.

Valuable papers on Diagnosis and Treatment, Medicine, Neurology, Surgery, Eugenics, make up this volume. The volume is well illustrated.

Catechism Series. Medicine Part I. Second Edition, Revised and Enlarged: Bacteriology, Parts I. and II., Second Edition, Revised and Enlarged. Price, one shilling net, each. Edinburgh: E. and S. Livingstone.

Medical students in the past have found these practical question-and-answer series of the utmost help and value. They still continue in popularity and can be heartily recommended.

Genito-Urinary Diseases and Syphilis. By Edgar G. Ballenger, M.D., Adjunct Clinical Professor of Genito-Urinary Diseases, Atlanta Medical College; Editor *Journal-Record of Medicine;* Urologist to Westley Memorial Hospital; Genito-Urinary Surgeon to Davis-Fisher Sanatorium; Urologist to Hospital for Nervous Diseases, etc., Atlanta, Ga., assisted by Omar F. Elder, M.D. The Wasserman Reaction, by Edgar Paullin, M.D. Second Edition Revised. 527 pages, with 109 illustrations and 5 colored plates. Price, $5.00 net. E. W. Allen & Co., Atlanta, Ga.

This book will be found a practical and up-to-date exposition of the subjects of which it treats. There have been so many recent advances in this branch of medicine as to call for the production of a second edition. It cannot be called, nor does it aim to be, a comprehensive work, but it sets out in a clear and concise manner the essentials, and the medical student will not fail to appreciate the book. Practitioners can read it with much profit and advantage.

Dominion Medical Monthly

And Ontario Medical Journal

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COMMENT FROM MONTH TO MONTH

Is the Ontario Medical Association Going to Withdraw from Affiliation with the Canadian Medical Association?

A notice of motion presented at the nominal meeting of the former in London last year looks toward this end; and an editorial in the December issue of the *Canadian Practitioner and Review* brings the matter into active medical politics. In that editorial the history of the foundation of the Ontario Medical Association is given; and some reasons advanced for such divulsive action, namely, "considerable friction" between the executives of the two bodies, and the too frequent setting aside the annual meeting of the Ontario Medical Association. Doubtless the latter is the main reason, though "considerable friction" may point to unsatisfactory financial arrangements. As the editorial referred to professes a desire for a dispassionate discussion, there would seem to be no reason to doubt that all matters could be arranged to better satisfaction in a very amicable way, and the two associations proceed to fulfil their destiny with mutual admiration for and help to each other.

It was at the annual meeting of the Canadian Medical Association in Vancouver in 1904 that the question of re-organization

of the national medical body was first officially broached. At that meeting the then General Secretary, in his annual report, suggested re-organization, believing that the existing provincial, county, district and city societies could easily be made branches of the Canadian Medical Association. The same report suggested the annual publication of a volume of transactions, to finance which the Treasurer was to be authorized to render accounts to all regular and transient members at that time.

At the annual meeting of the following year (1905), in Halifax, Professor McPhedran moved for a Special Committee on re-organization; and after much care, preparation and labor, a new Constitution and By-laws were formally passed at the meeting in Montreal in 1907, under the chairmanship of Mr. Irving H. Cameron.

The most harassing problem to solve, between the national medical body and its provincial branches, was the financial arrangements, and many at that time thought, and still think, that the Canadian Medical Association should be financed as a separate organization and so have no mixing of the finances with the provincial bodies at all. This would have been on a line with the successful American Medical Association.

The Ontario Medical Association has got the worst of it as regards meetings. This has probably been due to unwise selection of the places of meeting of the Canadian Medical Association. In 1910 there was no meeting of the Ontario Medical Association—the Canadian met in Toronto; in 1913, there was again no meeting—the Canadian met in London. By the unwritten law of civic selection, and considering the jumps the C.M.A. makes, Ottawa should be the place of meeting of the national medical body in 1915. This would be a sore touch for the Ontario Medical Association.

Just consider where the Canadian Medical has convened in the last dozen years: Winnipeg, 1901; Montreal, 1902; London, 1903; Vancouver, 1904; Halifax, 1905; Toronto, 1906 (no Ontario—no Canadian; B.M.A.); Montreal, 1907; Ottawa, 1908; Winnipeg, 1909; Toronto, 1910; Montreal, 1911; Edmonton, 1912; London, 1913—St. John, 1914. The Canadian Medical may then be expected to meet in Ontario practically every third or fourth year, following the history of the past twelve years.

No province can present as many places for meeting as Ontario; and it should not be lost sight of that the medical population of Ontario is three-eighths of the total medical population of the

Dominion, approximately one-half. Therefore, it would seem that Ontario should be entitled to her just quota of meetings of the Canadian Medical Association. But it is quite obvious this will not do, as where Ontario would have to suspend her provincial meeting every two or three years, other provinces would only have to set aside theirs once every six to ten years—and those provinces are supposed to be very strong for the National Medical Association.

What is the solution? Shall the Canadian Medical Association choose a permanent home for itself in Ottawa, like the Dominion Medical Council and the Canadian Medical Protective Association, leaving each provincial medical body to hold its annual meeting at will? Or would it be a more equitable arrangement to divide the Dominion into four districts—Maritime Provinces, Quebec, Ontario, Western Canada, and hold the annual meetings successively in those districts: 1914 in Maritime Provinces in St. John: 1915 in Montreal or Quebec: 1916 in Ontario—Ottawa, Kingston, Toronto, Hamilton or London; 1917 in Victoria, Vancouver, Winnipeg, or Edmonton?

There is another point upon which the Executive, or Financial Committee of the Canadian Medical Association deserves criticism —the complete organization of the profession as was expected under the scheme of reorganization of the C.M.A. The formation of county and city branches of the provincial societies or the admission of the already formed county and city societies into full membership has been tardy in the extreme. Had this been projected immediately after the adoption of the new Constitution and By-laws, six years ago, the profession in Canada would now have been a well-organized body. Their energies and enthusiasm, however, have been directed into another channel.

So far as the reorganization of the C.M.A. and the formation of an Executive Council and Finance Committee in that body were concerned, the very purpose ever in view was the full and complete consideration of all matters of importance to the Association and the profession at large. "Snap verdicts" upon any and every question were to be forever obviated. If the provincial societies had patterned their Constitutions after the Canadian Medical Association's, affiliation, as well as everything else of vital importance to the existence of any society, could never be exploited by a handful of enthusiasts and partisans to any cause.

Editorial Notes

ANTIVIVISECTION HYSTERIA

At the close of the year which marks the twenty-fifth anniversary of the founding of the Pasteur Institute, it is fitting to look back and with grateful appreciation survey the incalculable benefits which have come to us through the labor of such men as Pasteur, Tyndall, and Lister. We cannot here attempt an exhaustive account of all the triumphs that have come to medicine and surgery through the discovery of bacterial origin of infectious diseases, and through the aseptic methods and antitoxin serum therapy based upon this discovery. We must be satisfied to single out a few of the most significant facts.

Let figures tell their eloquent tale:

Mortality Among Persons Afflicted With Several Diseases.

Disease.	Before Introduction of Serum Therapy and Asepsis.	After
Rabies	About 16	Practically 0
Lockjaw	About 80	Practically 0
Diphtheria	About 30	About 8
Meningitis	About 80	About 20
Plague	5	0.4
Puerperal fever in hospitals	5 to 57	0.1
Compound fractures	67	Less than 1

Ex-President Taft, in an address before the Medical Club of Philadelphia, on May 4th, 1911, said: "Of the volunteer regiments mobilized during the Spanish-American war, ninety per cent. became infected with typhoid fever within eight weeks from the date of mobilization. To-day, two months after mobilization, with modern health regulation and the use of vaccination against typhoid, not one case of typhoid fever has appeared in the entire force except that of one teamster, who was not vaccinated."

Regarding the ravages of yellow fever during the French Panama Canal enterprise, before the cause of the disease was understood, we quote from an article by Dr. Orenstein, as published in our issue of November 9th, 1912: "The family of a French chief engineer consisted of five; four died of yellow fever. Of the five members of the family of the superintendent of the railroad,

three died of yellow fever. Of twenty-five Sisters of Charity who came to Ancon Hospital, twenty died of yellow fever."

Contrast with this the following figures, taken from the American period of work, when the mode of transmission of yellow fever by the Stegomyia mosquito was known and precautions were taken accordingly: "From July 1st, 1904, to June 1st, 1905, 77 cases of yellow fever originated on the Isthmus. In June, 1905, 62 cases; in July, 42; in August, 27; in September, 6; in October, 3; in November, 2; in December (in Colon), 1. During 1906 there was only one case of yellow fever on the Isthmus, in Colon. Since then not a single case of yellow fever has occurred on the Isthmus, although a continuous influx of non-immunes is taking place."

We would like to extend this list of triumphs further, but space is lacking, and there is another matter on which we wish to touch. We will introduce it by a few further significant figures:

Mortality Among Animals Afflicted.

Disease.	Before Introduction of New Methods.	After
Anthrax:		
Sheep, on certain French farms	10	1
Cattle, on certain French farms.....	5	1
Distemper in dogs (Karl Hopf's kennels).	50	2
Malignant jaundice of dogs (South Africa).	50-100	Practically 0*

*Among animals treated.

Other diseases of animals which have been successfully attacked by methods built upon Pasteur's work are rinderpest, pleuro-pneumonia of cattle, Texas cattle fever, swine erysipelas, glanders, etc.

There are, unfortunately, some ill-informed, and, we add without hesitation, ill-balanced people, who seek to oppose the wonderful progress here recorded because it has been gained through experimentation upon animals.

To the consideration of the more thoughtful among these we would commend the last quoted figures, which show that animals themselves have amply benefited from such experimentation. True, this argument will seem unnecessary to the unbiased reader who has perused the earlier paragraphs of our comments. But we are now speaking to the biased reader.

As for the hysterical and irresponsible antivivisectionist, we will attempt no missionary work on him (or her), but shall feel that our function is fulfilled when we have warned the other members of the community of the viciousness of the mental attitude and

the methods resorted to by such misguided persons. Those who wish to inform themselves in detail on this point are referred to a pamphlet by Dr. W. W. Keen, "The Influence of Antivivisection on Character," published by the American Medical Association. From this, to illustrate our point, we will merely quote an anonymous letter received by Dr. Keen:

"Arch Fiend:

"I have read with horror your article in the *Ladies' Home Journal* on vivisection.

"I hope your mother, if she is living, will die in the most terrible torture, and if she is dead, that she will never know rest for having given life to such a vile monster as you—is the nightly prayer of a dozen women who indite this."

This, written to a man who is following in the footsteps of Pasteur, doing the noble work of the medical profession.—*Scientific American.*

Pernicious Anemia. — Windesheim (*Münn. Med. Woch.*) repeatedly injected, intragluteally, ten c.c. of fresh warm human blood taken from the basilic vein and obtained the most gratifying results in a case of pernicious anemia.

Botulismus. — L. Büger (*Med. Klinik*, Berlin) reports twelve cases of meat-poisoning following ham or sausage ingestion from one pig, with five deaths. The treatment is different to that of ordinary meat-poisoning, on account of paralysis of stomach and bowels; and purgatives and emetics only lie in the stomach and add to the poisoning. As the sausage or meat lies in the stomach indefinitely, repeated rinsing out of the stomach is indispensable. This should be done even though days elapse before symptoms arise or the nature of the condition be understood. If the experiments of Kobs are confirmed, then ordinary diphtheria antitoxin will supersede the specific antibotulismus serum, as the former is more readily obtained. Other useful measures are venesection, saline infusion, high rectal injections, massage and faradization of the abdomen, inhalation of oxygen and artificial respiration. No feeding by the mouth should be practised, as aspiration pneumonia has been revealed at necropsy.

News Items

Dr. R. G. Brett, Banff, is visiting in eastern Canada.

Dr. Harvey Smith, Winnipeg, has returned from a visit east.

Dr. Charles F. Martin, Montreal, has left for a trip round the world.

Dr. Thomas R. Henry, of Harriston, Ont., has moved to Oakville, Ontario.

Brantford, Ontario, has purchased a smallpox hospital at a cost of $5,800.

Dr. A. D. McKelvey, Toronto, is confining his practice to ear, nose and throat work.

Dr. Gray, of Montreal, has been appointed superintendent of a hospital at Canora, Sask.

Winnipeg has again refused a by-law to provide $275,000 for the General Hospital of that city.

Toronto recently made a supplementary grant of over $8,000 to the Hospital for Sick Children.

The Dominion Government is erecting a four-story hospital building at the Grosse Isle Quarantine Station.

Dr. J. Orlando Orr, after a serious illness, is again attending to his duties as Secretary-Manager of the C.N.E.

Dr. Arthur Fisher, Montreal, father of the Hon. Sydney Fisher, died recently in Montreal, at the age of 98 years.

Mr. John Ross Robertson has donated $10,000 for furnishing the new wing of the Hospital for Sick Children, Toronto.

The ratepayers of Toronto refused to pass by-laws for $500,000 for the purposes of two, east and west, hospitals in the city.

Professor McPhedran was called to New York on the 8th of January to act as consultant physician to Sir James Whitney.

Professor J. George Adami, Montreal, addressed a meeting of the medical profession of Denver, Col., about the middle of December.

Dr. C. F. Smith, C.P.R. physician at Medicine Hat for a number of years, died the 28th of November, in St. Paul, Minn., of pneumonia.

The University of Alberta has commenced the training of medical students. During the present year only first-year students are taking lectures.

The new private building of the Toronto General Hospital was formally opened on the 6th of January. It has accommodation for over 150 patients.

To attend to his duties in twenty-eight municipalities in Northern Ontario, the officer of health of that district covered over 35,000 miles of territory.

Dr. Helen MacMurchy has returned from an inspection tour of private hospitals in Ontario, and reports that the new hospital legislation has proven beneficial.

After an absence of fifty years, Dr. Walker, who was surgeon to the expedition which discovered the fate of Sir John Franklin in 1859, is visiting in Victoria, B.C.

Dr. Edmund Boyd wishes to announce to the profession that he will confine his practice to the care of diseases of the throat, nose and ear. 142 Carlton Street, Toronto.

Dr. R. W. Garrett, Professor of Obstetrics and Gynecology in Queen's University, Kingston, has had to relinquish active practice and seek rest and recuperation in a sinatarium.

A Public Health Association has been formed in the county of Elgin, Ontario. Dr. Dorland, of Rodney, was elected President; and Dr. Shannon, of St. Thomas, Secretary-Treasurer.

The Dominion Government is taking precautions to prevent the introduction of smallpox into Manitoba from the United States. Medical inspectors have been appointed at different points along the boundary line.

By the death of Dr. John Caven, Toronto, on the 10th of December, Toronto lost one of its eminent and best-beloved physicians. He was born in 1860, and was for a number of years Professor of Pathology in the University of Toronto.

Colonel Carleton Jones, M.D., Director-General, Medical Services, Ottawa, delivered an address before the Academy of Medicine, Toronto, on the evening of the 6th of January, the title being the Relation of the Medical Profession to the Defence of the Country.

Dr. James D. Balfour, London, Ontario, one of the leading practitioners of that city, died early the morning of the 6th of January, of pneumonia. He was a graduate of the Western Medical College, of the class of 1887, and was a superintendent for a number of years of Victoria Hospital of that city.

Toronto's births, marriages and deaths showed an increase in 1913 over 1912. The births totalled 11,086, as against 11,100; marriages, 6,421, as compared with 6,153; deaths, 6,949, as compared with 6,313. All contagious diseases, with the exception of measles and typhoid, showed a decrease. Typhoid was fifty-two, the same as in 1912.

Dominion Medical Monthly

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Vol. XLII. TORONTO, MARCH, 1914 No. 3

Original Articles

FOREIGN BODIES IN THE AIR PASSAGES*

By Sir Rickman John Godlee, Bart.,
President, Royal College of Surgeons, England.

In responding to the request that I should make a communication to your Society, I must apologize for not being able at comparatively short notice to offer you much, if anything, that is new, and ask your excuse for bringing before you a subject on which I have already written. It seemed best to take one from that part of the borderland to which I have directed some attention, especially as it is one that is of interest to all branches of our profession.

The practical dealing with foreign bodies in the air passages has in large measure passed into the hands of the laryngologists, but it will return into the domain of the surgeons as they become more habituated to the use of the bronchoscope which, though a dangerous weapon in the hand of the unwary, is not really a very difficult instrument to use.

But the whole question is of great importance to all, to the pure physician on account of the changes which are set up in the lungs, and above all to the general practitioner, on whose shoulders rests the heavy responsibility of making an early diagnosis and insisting on the removal of these causes of offence with the least possible delay, as must be done when it is recognized that incalculable mischief may result from the presence of some of them even for a short time in the air passages.

As the radiographer must always be called in aid, if one is available, this interesting skiagram may well form my text. But, though the radiographer may be a good friend, it must be remembered that there are many foreign bodies which give no shadow,

* Delivered before the Academy of Medicine, Toronto, November 4th, 1913.

and others, like pieces of bone, whose shadows are no darker than those of the ribs. If the skiagram is to be a single one it is essential that it should be taken instantaneously, as the complicated movements of the lung make the shadow blurred and faint and almost certainly indistinguishable from the rib shadows, or the opacities caused by glands, inflammatory products, or those streaks called by the Germans *Hilus Zeichnungen*. These stripes, as seen in an instantaneous skiagram, follow the lines of the bronchi; but in those taken by long exposure are shapeless blotches. They are not, of course, the bronchi, as healthy bronchi are transparent to X-rays, but they are shadows of the accompanying vessels. I strongly urge stereoscopic skiagrams. The pair should be taken each at full inspiration, so that the healthy lung may be as transparent as possible. The shadow of a piece of bone, if seen in the stereoscope, will take its proper place in relation to the bones of the chest wall. It requires, however, a very instantaneous skiagram indeed to elude the heart-movements, which are well indicated in the shadow of this pin, and you see how much it has been moved by them.

The pin was inspired in this way. A young woman was playing with some friends, while holding a pin 2½ inches long with a glass bead head, in her mouth. She laughed, and it passed head foremost through the larynx and stuck in the left main bronchus. It ought to have gone into the right bronchus, because, as Aeby showed, this is not only the larger one of the two, but follows almost exactly the direction of the lower part of the trachea. But many foreign bodies go into the left side, notwithstanding. The dyspnea was not great, and soon passed off; so she ceased to trouble about the pin; but, as a cough persisted, she went to her doctor some months afterwards. He found only a few crackles along the left border of the sternum, and referred her to Sir Thomas Barlow, with the note that there was a history of foreign body, but he supposed it was the old story—incipient phthisis. This skiagram made at the hospital by Mr. Higham Cooper revealed the nature of the case. Sir Thomas asked me to see the patient, and I was reluctantly obliged to hand her over to my colleague, Mr. Tilley, for treatment.

Several considerations, both general and particular, are suggested by the picture.

At first sight it seemed impossible that the pin could lie, as it does, almost horizontally in the left main bronchus, and it was discussed whether it could have escaped from the air passages in part or altogether. But reference to a metal cast explained that.

if the head entered a secondary bronchus and stuck there, it is the only position it could possibly occupy.

The most important lesson to be learned is from the fact that so few symptoms were caused by the presence of the pin. I have often observed this in similar cases. For example, a vulcanite tracheotomy tube, broken from the shield, which had entered the right bronchus of a child, for several days, only caused imperfect entry of air into the right lung, and a piece of bone in the right bronchus, which did certainly cause a troublesome cough and some rise in temperature, gave as the only physical signs deficient entry of air, impaired movement, and a few moist râles at the right base. So it is not right to wait for signs or symptoms, because mischief may be set up in their absence. It must not be forgotten that, although, fortunately, the removal of foreign bodies, even after a long time, has effected a cure, there are many cases on record where, even a short residence in a bronchus of such unirritating smooth body as a collar-stud, has set up chronic bronchitis and bronchiectasis, from which the patient has never recovered. This is what prolonged residence of a foreign body commonly does, and I have pointed out that it is one of the commonest causes of unilateral bronchiectasis in children. The *modus operandi* is that the bronchi beyond the obstruction are never cleared of the secretions, which then become septic, and produce, first bronchitis, and then inflammation of lung of one sort or another—a matter to which I will return later.

Another very important point is that the doctor was inclined to discredit the story. Long experience has convinced me that it is much more common for the patient or his guardians to forget the occurrence of such an accident than for the tale to be invented. I have often had to drag the history out of the parents, and will here again mention a case I have often referred to that is much to the point. It was that of the small four-year-old son of a doctor, who was brought to me with what was thought to be empyema, following whooping cough, in 1888. It was really bronchiectasis, caused by a rabbit's vertebra, which had been inspired whilst the father himself was feeding the child with mulligatawny soup seven months previously. The bone was coughed up ten months after my operation. The child is grown into a man twenty-nine years old; he is married, but still had a cavity at his right base when last heard of. The moral of all which is, never neglect the story of a foreign body; be rather credulous than sceptical, see that no pains are spared to remove the object at the earliest possible moment, and lastly, remember that a person may live a great

many years with such a bronchiectasis, even although it be accompanied, as it often is, with severe, not to say alarming, hemorrhage.

The pin was a strange object to pass through the glottis; but not nearly so strange as many that have made the journey: large plum stones, great masses of meat or vegetable completely plugging the trachea and causing almost instant death (especially in lunatics), screws, the peg of a pegtop, needles and thread, tracheotomy tubes, a whistle, the tail of a herring, and countless others; besides living animals, such as leeches and round worms—a truly horrible thought!

This has led to many classifications, such as into hard and soft, rough and smooth, indestructible or perishable. They are not really of much value. Probably the most important distinction is into those that are, or can become, septic in their own right, and those that are not, in view of the sort of danger they may cause. It would be right, under the former, to include such bodies as may carry with them the germ of actinomycosis or moulds, which can grow in the human tissues.

One interesting distinction is into bodies which stop wherever they happen to stick, and those which at once start on their migrations; ears of corn and grass always do this. I once found part of an ear of wheat in an acute bronchiectatic abscess at the thin lower border of the right lung, extending through the diaphragm into the liver; and we had in our museum at University College Hospital an ear of grass which a baby put into its mouth and which came out through the skin of the back near the angle of the left scapula. The cough it set up was taken for whooping cough, and the emerging ear of grass for the core of a boil.

It might be wondered why these migrations occur if we did not recognize the constant and forcible movements which are going on in our insides. I think the amount of these movements is not really appreciated by those who have not handled a lung or a heart or had their fingers in the anterior mediastinum, or seen the mediastinum in the course of an extensive thoracoplasty, or looked with the physiological rather than the pathological eye down the bronchoscope. In a normal chest, with every act of respiration, every part of its visceral contents is moved except, perhaps, the extreme apices of the lungs at the necks of the first ribs. During inspiration the thorax expands and the diaphragm descends. Let us analyze just a few of the resulting movements. The sternum in full inspiration in an adult man is considerably further from the spine than in deep expiration at the lower end,

perhaps 1½ inches, though not so much above. The central tendon of the diaphragm again is not, as we used to think, stationary, but moves downward 30 m.m. (1¼ inches), it also moves forwards nearly to the same extent as the lower part of the sternum because the muscular fibres in front of it are much shorter than the posterior ones. These movements are accompanied by corresponding movements of the heart and the roots of the lungs; but as the shape and position of the heart vary and the pericardium is not a rigid sac, the upward and downward movements of the roots of the lungs are not nearly so extensive as are those of the central tendon of the diaphragm. The antero-posterior movements of the roots of the lungs are also less than those of the sternum, because the two pleuræ always touch one another in front of the heart and often do so behind. There are, as it were, both an anterior and a posterior mesopericardium to allow of the thickening of the thin anterior borders of the lungs and the inflation of their thick posterior parts during inspiration. In a direct side to side skiagram of the chest taken during full inspiration (but more easily in an oblique view) you may see a wide band of light between the shadow of the spine and that of the heart. This is a striking demonstration of what has been said above, and also of the amount of these movements. It incidentally reminds us of the explanation of the ease with which one pleura is affected from the other and of the danger of producing double pneumothorax in operations on the lower part of the posterior mediastinum.

As the upper part of the lung is more fixed than the lower, it might be thought that the act of inspiration would, by drawing down the distal portions of the air tubes, diminish the angle between the two main bronchi. But there is another force at work, namely, the inflation of the mass of lung that occupies this space, which would tend to increase this angle. I have made a number of experiments to elucidate this point with the help of my colleague, Mr. Hugh Morriston Davies, who is devoting, with much energy and originality, his attention to thoracic surgery.

Our method was to tracheotomize a monkey and insert through the opening two copper wires, one into each bronchus, and observe the movements through the screen. It was quite clear that the wire in the right bronchus was drawn inwards during inspiration, but we could not see the movement of the wire in the left bronchus. There is no reason to doubt that the movement was similar, viz., downwards and inwards.

Afterwards we blew bismuth powder into the bronchi, but the shadow was not dark enough to show upon the screen. The animal was then killed, and I will show you the skiagrams taken in extreme inspiration, and also after inflating the lungs with bellows. I show them because they illustrate how such investigations may be carried out, but it is difficult to measure accurately the angle between the two bronchi in so small an animal. Moreover, it is necessary to remember that artificial inflation of the lungs is not like natural inspiration; it is unlikely that the diaphragm will distend so far as in the normal process.

In case there are any anatomists present, may I remind them that the anatomy of the thorax of the text-books is the *anatomy of aspiration*. The measurements, the pouches of pleura between the aorta and esophagus and other matters need, I think, some reconsideration.

But there are yet other movements of the bronchi. At each act of inspiration they are lengthened by traction; for, speaking generally, each individual part of the lung expands and contracts in the direction of the bronchial tubes contained in it; that is, it moves mostly downwards and backwards below, mostly horizontally in the middle, and so on. During expiration the bronchi are shortened, partly by their own elasticity and partly by the contraction of their muscles. At each beat of the heart a very considerable movement is given to them which is easily seen through the bronchoscope, the left main bronchus being principally moved upwards and downwards, the right inwards and outwards. When we think of all these movements occurring during quiet breathing, and remember also that the calibre of the tubes is diminished to an almost incredible extent during coughing, sneezing and vomiting, partly by muscular contraction, partly by the pressure of surrounding solid bodies, there is no difficulty in understanding how it is that ears of corn wander about from place to place in the manner I have already referred to; and that the consideration of this interesting question, even superficially, has led me so far from the subject of my paper.

I wish now to enter a little more in detail into the results of the lodgment of foreign bodies in the air passages. Curiously enough a body may pass through the narrow chink of the glottis and lodge just beyond. I have seen this happen with a cowrie shell and also with a grain of corn, which gave rise to an abscess by the side of the cricoid cartilage, thought to be tuberculous.

A large piece of meat or other soft material, if it becomes impacted in the trachea, rapidly causes death.

Any solid body that becomes impacted in a main bronchus and completely obstructs it, causes the whole lung to collapse and pass into a state of septic disintegration, exactly like the condition, first described by Pearson Irvine, which results from the pressure of aneurysms or other tumors. The more septic the foreign body the more rapidly does the process go on.

A smooth solid body like a tooth, or a stud, straddling across the bifurcation of secondary or smaller bronchi, first sets up bronchiectasis in the part from which these bronchi came; but the process may gradually extend to the whole base, first, of the affected lung, and then of the other. These cases do not differ from what may be called ordinary cases of bronchiectasis, they are equally liable to pneumonias, or even hemorrhages, amyloid disease, and so on; and, like them, they may last on for many years; and, like them, they may any time terminate in cerebral abscess.

The changes are different if the foreign body is either putrid at the time or one that can decompose or become the seat of decomposition, because the changes in the portion of lung involved are much more acute; and, although dilatation of the bronchi is generally marked, a definite abscess often forms. This very important class includes not only pieces of bone and fragments of teeth, but smaller particles which are easily set free in operations about the mouth and nasopharynx, such as bits of mucous membrane or shreds of cotton wool, to which the name of foreign bodies seems scarcely applicable. But they are potent for mischief. I have seen so many acute stinking pulmonary abscesses following shortly after nose and throat operations that I cannot doubt that they are causally connected, and I therefore urge that every possible precaution should be taken to prevent this accident happening, whether by suitable arrangement of the patient's position or such special methods of administering anesthetics as I am hoping to see more of in the course of this expedition than I have done at home.

In connection with this part of the subject it must be remembered that it is not uncommon for these cases, if unrelieved, to end in pulmonary tuberculosis, which reminds one of those still smaller, almost imperceptible, foreign bodies, such as iron filings, minute fragments of stone, coal-dust and floating particles from infected hides, which may start many forms of serious pulmonary disease, but are not properly included in our subject.

The important question of treatment remains for consideration, and I will briefly refer to what was until ten or fifteen years ago the only available practice, because that is the line that in

remote districts will still have to be adopted. First, it was essential to do tracheotomy, by preference a low tracheotomy, because this offered the only chance of instrumental extraction, and without tracheotomy it was unsafe to attempt inversion of the patient or wait for the possible expulsion of the foreign body by coughing. The favorable result in Brunel's celebrated case is not a thing to trust to. After opening the windpipe various forms of catcher were used, the simplest and one of the most effectual being a twisted piece of stout silver wire. Many kinds of forceps were devised, amongst which, I think, one of the most useful was made for me on the plan of Lister's forceps for extracting calculi from the membranous or prostatic urethra. Many a foreign body has, in the past, been removed in this way, and I doubt not many will be so removed in the future.

But a revolution in the treatment has followed the invention by Kilian and Brüning of a practical straight bronchoscope. Their labors crowned those of other workers in the same field, starting more than thirty years ago with those of Kussmaul and Mikulicz, and carried on by Gottstein and others. It is now possible to introduce straight tubes not only into the primary, but into secondary and even smaller bronchi—a feat which seemed impossible before we knew about the normal movements which occur in the roots of the lungs.

Let us return to the case which forms our text. With the patient recumbent and the head thrown well back, the instrument was passed with apparent ease through the glottis down the trachea and into the left bronchus, and at once Mr. Tilley saw the pin, and so did I. He seized it with a pair of Kilian's forceps and pulled. It was an anxious moment, for the point was fixed in the mucous membrane, and it was doubtful in the first place whether the forceps would hold, and in the second whether it was right to pull hard. However, he persisted, and the pin broke across, and only the part with the head attached came out. By this time there was a good deal of bleeding and a spasmodic cough and consequent contraction of the bronchus, and, in spite of mopping with cocaine, it was impossible to extract the pointed end. He, therefore, decided to send the patient back to the ward, and by great good fortune the other portion was coughed out during an attack of vomiting a few hours afterwards, but we agree that the safe thing would have been to do a tracheotomy, as there was a risk of suffocation if the pin had been become impacted in the glottis. It would certainly not be wise to leave a patient un-

tracheotomized unless, as in this case, there was someone on the spot prepared to do tracheotomy at a moment's notice.

It is literally true that hundreds of foreign bodies have been removed in this way. But, if it be found impossible to extract them, Killian advises that a low tracheotomy should be performed and the bronchoscope introduced through the wound, and it is pointed out that through such a wound the bifurcation of the trachea can be seen with a very simple form of speculum.

There is one very troublesome and dangerous class of foreign bodies, for the removal of which it is sometimes said a preliminary tracheotomy is almost essential. I refer to soft objects, like peas or seeds of Indian corn, which have swelled after being inspired. Mr. Tilley kindly allows me to mention a case which occurred during the session of the last Congress in London, which shows that this need not be necessary and is, I think, the first time that such a dodge, if I may call it so, was adopted.

The Removal of a Pea from the Right Bronchus by a New Method.

J. O'M., male, age 65, was admitted into the University College Hospital, August 6th, 1913, because of a severe cough which was said to have been caused by the inhalation of a green pea three days previously.

On admission the patient looked ill and exhausted, a condition which he attributed to loss of sleep caused by violent fits of coughing accompanied by profuse expectoration.

Examination of the chest elicited defective air entry and slight dullness on percussion over the right lower lobe posteriorly.

A twenty per cent. solution of cocaine was applied to the lower pharynx, larynx and upper portion of the trachea.

With the patient sitting upright, the bronchoscope was easily passed into the right bronchus. The mucous membrane was very congested, and it was necessary to remove an excess of mucous secretion with gauze mops. The pea was then easily discernible, and was apparently firmly impacted in the bronchus.

Knowing that after a three days' sojourn in the bronchus a green pea would be very friable, I dared not attempt to seize it in forceps, for it would almost certainly have disintegrated and probably septic pneumonia would have followed the deeper penetration of the fragments into the smaller bronchi.

I, therefore, passed the end of the bronchoscope tube firmly onto the pea, and then improvised a piston of compressed wool

moistened with liquid paraffin, passed this slowly down the tube till it abutted against the pea, and then made a sudden but slight motion of withdrawal of the piston. This had the desired effect of sucking the pea into the lower end of the tube, so that piston, pea and bronchoscope were withdrawn together.

The patient left the hospital next morning, entirely relieved of his symptoms except for a little loose expectoration.

The pea and its method of removal were demonstrated at the first meeting of the Laryngological Section of the recent International Congress of Medicine in London, and as far as I could gather no similar method had hitherto been recorded, for it had been the almost universal custom, in view of the dangerous nature of such soft foreign bodies, to perform a low tracheotomy and approach the obstruction through the wound, either by a short tube (bronchoscope) or by means of hooks, sharp spoons or other similar contrivances.

I suggest to him that something in the nature of an idealized stylographic pen-filler will have to form a part of his armamentarium.

The briefest mention can only be made of the various forms of intrathoracic bronchotomy, which are difficult and dangerous operations, which have, however, sometimes proved successful when simpler methods have failed. Occasionally it may be advisable to open the pleura and feel the lung, if the body has passed into its substance. I have done this myself, not, however, successfully in the old days. It is now a much simpler procedure if one of the methods of securing ultimate inflation of the lung—high pressure or low pressure—is at hand. If the body is felt the lung must be fixed to the chest wall, and after this is done the lung must be incised and the foreign body extracted.

In conclusion, I must again apologize for my paper, not because the matter of it is uninteresting, but because I fear that most of what I have said will appear to you in the light of household words. I shall be fortunate if I have succeeded in placing it before you in a somewhat new light.

THE ROLE OF THE PREPUCE IN DISEASE

(The American Practitioner.)

By Gustav F. Boehm, Jr., M.D.
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An old topic, but one which is of great importance, is the question of the relationship to bodily health of that much operated upon portion of the male anatomy, the prepuce. To it have been attributed a legion of nervous disorders; it is accused of being an accomplice to the Neisserian diplococcus, the Ducrey organism, and that doughty warrior, the treponema pallida; gastroenteric conditions are laid at its door; in fact, if the literature be carefully gone over, one marvels at the malignant powers of this little fold of skin and mucous membrane. The surgeon and the obstetrician, the pediatrist and the neurologist, and, last but not least, the general practitioner seize upon it as the cause of a myriad of bodily ills. Theology, too, has for centuries attacked it, both for ceremonial as well as hygienic reasons.

It is the purpose of this paper to attempt to reach some fair conclusions as to what part this mucocutaneous fold really plays in the pathogenesis of disease, and to call for more conservative methods of treatment than circumcision.

In preputial conditions the sole considerations seem to be (1) too long a prepuce, (2) too narrow a preputial orifice, and (3) other malformations. These are the usual anomalies for which operation is advised. The hygienist then steps in and claims that for cleanliness (?) sake, and to prevent (?) venereal disease, it must be removed. The neurologist demands its removal, because it causes (?) chorea, epilepsy, mental conditions, etc., in which cry he is ably assisted by the pediatrist.

The subject will be approached in the following manner:

1. The normal anatomy and histology of the prepuce and glans.
2. The physiology of the prepuce.
3. Pathological preputial conditions classified.
4. The bearing of the prepuce on local and systemic conditions.

5. The rational treatment of the prepuce.

1. The normal anatomy of the prepuce.

The prepuce is a more or less cylindrical fold of mucocutaneous membrane which surrounds the glans penis. Its outer surface is composed of epidermis similar to the outer covering of the penis. Its inner surface is still composed of epithelium, but of a type less ceratinized, and is moist at all times, because of the secretion of its glands and of the presence of a certain amount of smegma. Its deeper structure is composed of connective tissue and some involuntary muscle fibres. It is markedly elastic and extensile, and readily adapts itself to the various conditions of the copulative organ.

The blood supply in the young is scanty, but in later life is abundant. The nerve supply is free, and here comes the first difference of the prepuce from skin elsewhere. Throughout its whole surface are distributed numerous sensory end organs, so highly specialized that they have been aptly called "the genital corpuscles" by Kranse. Besides these there are a considerable number of Paccinian corpuscles to be found.

Nor is this the only point where these special end organs are to be found. They are present over the entire surface of the glans penis.

2. The physiology of the prepuce and glans penis.

Nature, as a rule, makes few errors—and for a certainty she did not err in providing man with a prepuce. The ultimate object of all animal existence is, after all, procreation, the propagation of its own species. True, we may do other things; but, after all, the primal law of man is to "be fruitful," to which civilization has added the duty of educating his offspring to better standards than his own. And in procreation the prepuce plays an executive part.

We have seen that the prepuce forms a covering for the glans; we have seen that its inner surface is moist, as is the glans; that its inner surface is studded with special sensory end organs, as is the glans. If we analyze these factors we will find (1) that the prepuce is a protector of the glans, and (2) that it heightens the sensibilities during the act of coition, and thus assists in the sexual act.

During the flaccid state of the organ the glans is completely covered by the prepuce. It protects the delicate epidermis of the glans from injury; it prevents continual irritation of the genital corpuscles.

In the erectile state of the penis the glans is entirely exposed, the foreskin vanishes, but in such a way that an area of mucous membrane, equal in size to the depth of the prepuce, with its numerous specialized nerve endings, is added directly to the surface of the glans. The physiological result is heightened sexual stimulation. Remove this surface, and just so much specialized tissue is removed from taking part in the act.

Physiologically, then, the prepuce has definite functions—protective and sexual—and these should not be forgotten when one deals with it as a factor in disease.

3. Pathological preputial conditions.

These can be classified as follows:

(*a*) Excessive length of prepuce.
(*b*) Short, or absent, prepuce.
(*c*) Phimosis.
(*d*) Preputial adhesions.
(*e*) New growths.
(*f*) Venereal disease.
    (1) Verrucae (gonorrheal).
    (2) Chancroids.
    (3) Chancre.

It is not the purpose of this paper to enter into the discussion of venereal or dermatological conditions. They and new growths will only be spoken of here as part of the general topic.

4. The bearing of the prepuce on local and systemic conditions.

(*a*) Local conditions.

A spasm of public interest in the prepuce has during the last five or ten years had its sway. Because the medical profession has laid so much stress upon its importance, parents have come to think that its removal is essential to the welfare of the child—and in many instances the profession has not been loath to cry "operation" on the slightest pretext.

And not the least of these has been "local hygiene." The story is almost invariably the same. Remove the prepuce, and smegma, etc., will not gather, disease is prevented. Absolute absurdity! In the first place, the ordinary human being should take an occasional bath—and a parent should teach a child that the foreskin is to be retracted during the bath and excess smegma removed. The average mother teaches her daughter proper vaginal hygiene to prevent vaginitis, etc. The father can do a similar thing for his son by instructing him in his personal hygiene.

Again, the removal of the prepuce prevents, or helps prevent, venereal disease. This is a constant tale on the part of young

libertines who enter our offices. We did not know that the prepuce normally harbored the gonococcus after infected intercourse. Of course, it is present here, as part of the surface exposed; but as most gonorrheas in the male seem to be in the urethra, it would appear that they find their way there during the act of coition.

Luetic infection must have an atrium, a point of entrance; and surely an unbroken mucous membrane of a prepuce is no better point for entrance than an unbroken mucous membrane of a glans unprotected by its covering.

This, then, disposes of the hygienic myth which advocates circumcision for local prophylaxis.

The remaining local processes will be considered under the general treatment.

Systemic conditions:

The pediatrist, the neurologist and the general practitioner have pointed out the value of circumcision in certain nervous and mental conditions, but have too frequently argued *ergo hoc, propter hoc.* The gamut of neurological diseases said to be due to the prepuce runs from chorea to insanity, from epilepsy to homicidal mania.

The sole effect the preputial adhesions or phimosis can have is a reflex one—and to be of great effect the nervous system of the individual affected must be below par. True, choreiform movements, epileptiform convulsions, masturbation and other symptoms of disease may be aggravated by an adherent prepuce or a phimosis, but only if the patient be of a psychopatic constitution. One frequently sees cases in which, with marked malformation, the patient is not aware of his abnormalities, and never has a disturbance at all simulating nervous disease.

In children it is not unusual to see masturbatory movements. If the prepuce be at all redundant, or if there be a tendency to phimosis present, they are at once declared to be due to these conditions. Atwood and Clark have described movements, rocking, finger sucking, leg friction, etc., and have called attention to their significance as an evidence of nervous disease, or psychopathic constitution. Must, therefore, similar movements, convulsions, etc., be attributed to preputial abnormalities? It would seem wisest to investigate carefully the reflex causes for these seizures, it is true; but the practitioner should not forget that the true underlying cause, the insufficient or abnormal psychic makeup, must also be investigated.

Nocturnal enuresis is often attributed to abnormalities of the prepuce. Modern investigations into the field of the psychopathic

point out well that this condition is frequently due to hysteria, to epilepsy, etc., and not to the too frequently assigned cause. After investigating all other causes than preputial conditions for this annoying symptom, one will find that it can but rarely be attributed thereto.

One can investigate other instances of the detrimental effect of these preputial conditions, and one is astonished to find, on analysis, how small a part it really plays in disease processes and how complacently they have been attributed to it.

The Rational Treatment of the Prepuce.

Three words suffice for the treatment of the normal prepuce—"Leave it alone." It has its purpose to fulfil; it causes no trouble; here "judicious neglect" is to be the treatment. Cleanliness, of course, should be taught. If illicit intercourse is part of the routine of our patient's life, he should be cautioned or instructed in prophylaxis against venereal disease.

Preputial adhesions should be broken up according to approved methods. Circumcision is unnecessary. Again the advice, so far as the prepuce is concerned, is "Leave it alone."

For the remaining abnormalities the operator should employ conservative methods. The glans should be liberated from the prepuce. Remove only as much prepuce as is essential to secure complete retractibility from the glans, and no more.

If these methods be followed out the physiologic mean will be the result, and, as a fact, the reflex irritation of an unprotected glans will be avoided.

Conclusions.

1. The prepuce has a definite, physiologic purpose.
2. It is not the cause of all the ills to which its abnormalities are attributed.
3. It should not be removed for so-called prophylactic or hygienic reasons.
4. When necessary to operate upon it, do so conservatively.

THE TREATMENT OF THE PNEUMONIAS

By Robert L. Wilson, M.D., Philadelphia.

The total number of cases of pneumonia (*J.A.M.A.*, Jan. 24th, 1914) in the medical wards of the Philadelphia General Hospital in 1911-13, was 596. Hypostatic pneumonia cases, those in the surgical wards, and in the children's branch, are not included. Practically every case of the 596 was treated in cold fresh air, outdoors, on balconies or specially constructed bridges. Perhaps the majority of the cases occurred in alcoholic subjects, a few in acute alcoholism. The recoveries were 232; deaths 364.

Under various methods of treatment the recoveries were 38.5; deaths, 61.5 per cent.

The cases not over 100° F. were 393; above 100° F., 203, the latter frankly suggestive of croupous pneumonia.

The need of determining very early just which form of involvement the physician has in hand is pointed out.

Fresh air: This is essential in both forms. Every air vesicle must or should receive its full quota of pure, fresh air. An ample supply is even more essential to the pneumonia patient.

The patient, if possible, should be placed bodily outdoors, *provided, and only provided, the case is of a febrile type of fibrinous pneumonia.* In fibrinous pneumonia free rein should be given to the use of fresh air, cold if possible, warm when there is no other supply. He cannot "take cold." The patient must be kept comfortable by a mackintosh over the mattress, the bedclothes surrounding the body, folded up under the feet and legs; hot-water bags or bricks to the feet—the nose and mouth only exposed. But not cold air in broncho-pneumonia, where body heat and vital energy are already low. Unnecessary deaths result from cold fresh air in broncho-pneumonia.

In suitable cases of febrile, sthenic type of fibrous pneumonia, outdoor air will hasten easy respiration, less labored heart action, peaceful sleep, and a decided relish for food. Cerebral symptoms and occasional intestinal paresis are less likely to occur.

In the asthenic cases with broncho-pneumonia the symptoms are all exaggerated. The fresh air must be warm. Cold does harm.

Food: This is an important item. In fibrinous inflammation as little as possible should be administered. This must be most nourishing and easily digestible. It should be given at infrequent intervals. Milk is the ideal diet, so long as tympanitis remains absent. Other simple soft foods are junket, custard, one-minute boiled eggs, soft milk-toast. If the patient be very hungry, feed more liberally.

In broncho-catarrhal pneumonia the patient requires a supporting diet from the very first.

Water: An adequate supply is essential to ward off the toxic state. Not less than three pints in twenty-four hours by the average adult patient. Eight glasses a day should be written down.

The gastro-intestinal tract: There should be a thorough initial sweeping out with castor oil, and every second day. Most patients will need no other drug from start to finish.

Mechanical and Local Measures: One of the most important measures is the care of the skin. It should be free to perform its functions. It should be kept clean. There should be sponging of the skin with warm water night and morning, and any clothing worn next the skin should be changed daily. Especially will this be found restful in the high temperatures of febrile fibrinous pneumonia. Stupes in the form of turpentine or hot-water applications often relieve pain and lessen the tendency to further congestion, especially when there is an area of pleurisy present. Dry cupping and hot stupes is a favorite method of the writer. Bleeding may be beneficial in selected cases of fibrinous pneumonia; not much used now-a-days. Hot foot-baths used under the bedclothes have a place in distributing the circulation. The ice-bag is of doubtful value, but it can quiet an irritable, overworked heart.

Drugs: Many patients are better without any drug treatment, except there is a definite indication for so doing. Atropine is valuable as a cardiac tonic and respiratory stimulant; or probably morphia for cough, sleep and restlessness—hypodermically.

The Crisis: The sudden fall of temperature, the tremendous expenditure of energy, nervous and chemical, in the final overthrow of the disease, the instantaneous relaxation of the tired heart, must be met by artificial warmth—hot blankets, hot-water bottles, etc.—hot water or hot lemonade internally, absolute rest and cardiac stimulants, especially atropine.

RESUSCITATION OF THE DROWNED

The most recent method advocated for the resuscitation of the drowned was introduced in 1903 by Prof. E. A. Schäfer, and this is pronounced by the Johns Hopkins Bulletin, from which we quote what follows, "one of the most important contributions ever made to the literature of resuscitation."

Schäfer found the amount of water sucked in during the complete or partial submersion had no relation to the weight or size of the animal, and the amount was also found to vary greatly—varying from 75cc. to 690cc. Nor was there any relationship found between the possibility of recovery by artificial respiration and the amount of water taken in. If the animal was removed immediately after drowning, very little water was found in the lungs—it was found to be absorbed into the blood nearly as fast as it was taken in.

Schäfer observed that "the physiological phenomena of drowning are a form of the phenomena exhibited in all cases of asphyxia. They are modified, however, by the reflex effects of the contact of the water with the sentient surfaces of the skin, larynx and air passages; and these show themselves most markedly by a primary inhibition of respiration, which commonly occurs, as well as by an early and persistent tendency to cardiac inhibition. Contact of the water with the air-passages leads also to an increased secretion of mucus, and may offer an insuperable obstacle to the passage of air into or out of the alveoli and render futile any attempt at artificial respiration."

The tracings made by Schäfer show that the most common phenomena relating to the respiration are the following:

(1) An initial cessation (holding of the breath), which may last some 20 seconds.

(2) When resumed, the respirations are slow and may be irregular, but are deeper than normal and tend to increase in depth and slowness as asphyxia progresses. They are sometimes moderately slow and regular for a minute or two, and then become much slower; usually they cease somewhat abruptly.

(3) The total cessation of respiration takes place a variable time after immersion—sometimes in less than two minutes, sometimes not until five or six minutes, but usually in about three or four minutes; during these times water is being passed in and out of the air-passages.

With regard to the circulation, the most prominent features were found to be:

(1) A preliminary fall of arterial pressure, mainly due to cardiac inhibition, but vaso-dilatation was also a factor.

(2) An arrest of this fall, followed, in spite of greatly increased inhibition, sometimes by an actual rise of pressure, the arterioles constricting.

(3) A final fall of pressure, with increased slowing of the heart-beat. Sometimes this was accompanied by a gradual weakening of the beat; in these cases the blood pressure fell steadily, coming down nearly to zero; the heart continuing to beat, with less and less force, for one or two minutes, in one case for as long as four and a half minutes, after cessation of respiration.

Schäfer found that the most effective method of resuscitating animals after drowning was the compression of the thorax and abdomen either in the supine or in the prone position. In the former, occasionally he observed post mortem that the liver had been ruptured, with extravasation of blood into the abdominal cavity. In fact, this accident has been known to happen in the human subject after employment of artificial respiration in the supine posture.

There was great variability of the results of artificial respiration after drowning in the dog, even when the method employed was calculated to exchange a normal amount of air. As a general rule, if respiration had just ceased and the heart was still beating steadily, artificial respiration would restore life. But if the heart stopped simultaneously with the respiration or suddenly ceased soon after, the prospect of recovery was smaller.

Another point which was accentuated in these experiments was the limited time, after cessation of natural respiration, within which artificial respiration was likely to be effective. If more than two minutes were allowed to elapse after the natural respirations had ceased, failure to recover the animal was nearly always the result, even if the heart was still beating. The time, therefore, at one's disposal for the resuscitation of a drowned subject is measured out in small fractions of a minute; and it is no exaggeration to say that every second is of importance, and that no time should be employed in loosening clothing or in any preliminary operation, but that in all cases artificial respiration should be commenced without one instant's delay.

Schäfer and his assistants measured the gaseous exchange which occurred in the live human subject during artificial respira-

tion by the methods of Silvester, Hall and Howard, and found that by none of these methods could they produce as large amount as by a new method which Schäfer suggested.

In this method, which he calls the "Prone Pressure Method of Artificial Respiration," the subject is allowed to lie prone, i.e., face downwards. The operator kneels on one side of the subject, facing the head, and places his hands, close together, flat upon the back of the subject over the loins, the fingers extending over the lowest ribs. By now leaning forward upon the hands, keeping the elbows extended, the weight of the operator's body is brought to bear upon the subject, and this not only compresses the lower part of the thorax but also the abdomen against the ground, the pressure being fairly equally distributed. The result of this is that not only the thorax diminished in extent from before back, but, owing to the pressure which is communicated to the abdomen, the viscera are compressed and tend to force the diaphragm up, so that the thorax is diminished in capacity from above down. This is no doubt the reason why the pressure method, when applied in the prone position, is more effective than when applied in the supine position as in Howard's method. The pressure is applied not violently, but gradually, during about three seconds, and is then released by the operator swinging his body back, but without removing his hands. The elasticity of the chest and abdomen causes these to resume their original dimensions, and air passes in through the trachea. After two seconds the process is again commenced, and is continued in the same way, the operator swinging his body forwards and backwards once every five seconds, or about twelve times a minute, without any violent effort and with the least possible exertion.

Experience has shown that a single person can employ this method without becoming fatigued or exhausted, which is not true of some of the other methods: and further, it is a very simple method and needs hardly to be taught. The reason why this method of Prof. Schäfer's is to be recommended in preference to any other method thus far described lies in its many obvious advantages, chief among these being the following:

(1) Ease of carrying out the method.
(2) Efficiency of gaseous exchange.
(3) Extreme simplicity of the procedure.
(4) Impossibility of the air-passages being blocked.
(5) No risk to organs (liver, etc.)—*Medical Standard.*

THERAPEUTIC NOTES

Alcoholism. — B. L. Spitzig, Cleveland (*Journal A.M.A.*, January 17), offers a physico-chemical theory of alcoholism. He has observed that many tipplers begin at an age when boyish habits and tastes yield to those of a man. At maturity the demand for carbohydrates is materially lessened and the appetite for alcohol replaces it in the tippler. There is sometimes a positive aversion to sugar. "The chemical relation of carbohydrates to alcohol is significant. Dextrose is convertible to carbon dioxide and ethyl alcohol. The combination of carbon, hydrogen and oxygen makes for increased nutrition whether it be derived from alcohol or indirectly from sugars and starches. The human organism when deprived of sufficient sugar seems of necessity to demand an increased supply of alcohol. Conversely, when the body is satiated with alcohol it has little need for carbohydrates." Based on this theory his treatment for chronic alcoholism consists in gradually withdrawing alcohol and replacing it in the diet with sugar. When there is a strong distaste for this he uses lactose, a dram every two hours, given in powder for the psychic effect. The gastric and nervous disturbances are appropriately treated, and, after self-confidence is gained, all medication ceases and sugar is gradually reduced. With care, glycosuria can usually be avoided.

Rheumatic Endocarditis. — W. P. Lucas and M. H. Wentworth (*Am. Jour. Diseases of Children*), believe prolonged rest the best part of the treatment in first attacks. Permanent cure lessens with successive attacks. Rest can be procured in the home or in hospital if the hospital is alive to the importance of long continued rest. Most do not wish to keep these cases too long in the institution. The infection needs to be properly treated in the first attack, otherwise permanent cure is not likely. Months of rest rather than weeks are essential to cure. None should be treated less than six weeks. Fresh air plays an important, and medical treatment a minor, part as compared with rest. Fresh air, rest, good food, and a calm, cheerful mind are the essentials in treatment. The medicinal treatment is purely symptomatic. Cardiac

stimulants are not needed in primary attacks. Salicylates, especially in the form of aspirine with sodium bicarbonate, are of considerable value in the acute febrile stage. Special attention should be given to constipation. The patient should be advised to complain if fatigue, pain, loss of appetite or dyspnea present themselves. In broken compensation—rest.

Treatment of Tabes and Paresis. — W. H. Hough, Washington, D.C. (*Journal A.M.A.*, January 17), after remarking on the importance of early diagnosis of nervous syphilis and the difficulties which it presents, says that authorities are now well agreed that it is best met by the mercury-salvarsan treatment as with syphilis in general. In the later manifestations, however, such as paresis and tabes, which have been shown to be active syphilitic conditions, treatment has not been so generally successful. Salvarsan seems to have a greater predilection for most of the other tissues of the body than it has for nerve-tissue, which may explain some of the non-success. It has been shown that the blood-serum of recently treated or cured syphilities has a marked trophic action on the specific spirochete, and the following technic has been devised by Swift and Ellis for bringing an effective medical agent into immediate contact with the diseased process without incurring the danger of direct injection of salvarsan into the subarachnoid space. "A dose (generally the maximum) of salvarsan or neosalvarsan is given intravenously in the usual manner. At the end of an hour from 50 to 60 c.c. of the patient's blood are drawn by means of venous puncture, clear serum is separated, diluted to 10 per cent., with normal salt solution, heated to 56 c. (132.8 F.) for half an hour, kept cool until the following day, then warmed to body temperature and injected into the subarachnoid space by means of lumbar puncture after the withdrawal of about 15 c.c. of spinal fluid, the amount of diluted serum injected being 30 c.c. (After the first few injections, if well tolerated, I usually inject 40 c.c. of a 50 per cent. serum.) It must be injected slowly without much pressure. After the injection the patient is kept in bed for about twenty-four hours with head lowered." The number of treatments varies with the case, but the general rule is to give eight or ten treatments, one every second week, and then discontinue them for a while, repeating, if necessary, and using as indices the Wassermann test, with the blood and spinal fluid and

the cell and protein estimations of the latter. Thus far the treatment has been tried by but few. Hough gives a brief summary of the cases in which he has himself tried it in tabes. Others have obtained about the same results in this disease. In paresis improvement has been noted by many in the treatment, especially by Cotton, Myerson and Asper. The problem here is more difficult than with tabes, and early treatment is important. His own experience includes six cases, of which four are reported, one at some length. In all four there was pronounced improvement in the four reactions, which is more than he has observed in other methods. If we are able to arrest the progress of paresis and tabes by this method, it is the most marked advance that has yet been made in the treatment of these hitherto incurable conditions. The general opinion of those who have tried the method is that it is the most promising one for tabes and paresis that has yet been devised. The article is illustrated by charts.

Dysmenorrhea. — J. Novak (*Weiner Klin. Woch.*), having found a history of painful menstruation in his puerperal bradycardiac and arrhythmia cases, considers this suggested the dysmenorrhea was caused in the same way. As atropine exercises a prompt action on bradycardia it was thought atropine would be beneficial in dysmenorrhea. The treatment was applied in large numbers of cases, and thirty-eight were followed up. It was found thirty of the women were materially benefited by atropine. There was no pain at all during menstruation, or, if any, negligible.

Epilepsy. — A. Gordon (*N.Y.M.J.*) selected two grave cases of epilepsy. From each he withdrew 30 c.c. of cerebro-spinal fluid and then immediately injected 3 c.c. into each other's arm. The headache following withdrawal of the fluid disappeared in twenty-four to forty-eight hours. Bromides were continued as usual in the two cases. In three days—no attacks. Then four injections in two weeks—not a single attack. The promising results in these two cases led to further experiments on two other cases. In one, a little girl, no fluid was withdrawn. The four cases were considerably benefited, the severity of attacks and frequency being diminished.

Varices.—G. D'Oria (*Riforma Medica, Naples*), followed Bondi's argument of lessening the supply of blood to varicose veins through operation on the artery. By this means the veins could more easily take care of the blood which reached them. In two cases a small segment was cut from the superficial femoral, between two ligatures, just below the point where the deep femoral branches off. One patient was a man of 39 years, the other a woman of 34 years. Both had suffered for years from varicose veins and edema of the left leg. After the small operative wound healed all disturbances gradually subsided. Both patients became entirely free from the varices and edema. The cure has persisted three years in both persons. The trouble in both was of thrombotic origin.

Petrol as a Therapeutic Agent. — G. A. Stephens (*Dublin Jour. Med. Sc.*) has used petrol or gasoline in the following: As a scalp cleanser in excessive dandruff, in alopecia areata, pediculi capitis, wounds of the scalp for removing surgical "dirt," pustular eruptions of the beard, barbers' rash, scabies, cracked nipples, soft corns, burns of all kinds, in operations, before incision for cleansing skin, after stitches, then a dry dressing. It should never be handled near a light or fire.

Cholelithiasis. — H. B. Anderson (*Can. Med. Assn. Jour.*) claims medical treatment is indicated in many cases preliminary to operation. It is also indicated in all cases after operation to allow complete subsidence of infection. The Karlsbad cure or home modification thereof is advised—copious use of hot Carlsbad water or Carlsbad salts dissolved in hot water. Rectal injections of hot water may be used. The diet is to be plain and non-irritating, the intervals between meals not being too long. Bile salts and salicylates and hexamethylenamine are considered of value.

Gastric Crises of Tabes. — J. Tinel (*Arch. des Maladies de l'App. Dig.*) refers to the anatomic basis for gastric crises, the inflammatory processes in the dorsal roots, the responsibility of the splanchnic nerves, the operative treatment. Foerster's opera-

tion has a record of 31 per cent. mortality in sixty cases. Twenty-seven patients were partially or completely cured, and six much improved. The failures in eight cases were due to insufficient roots severed. The operation is too serious except for desperate cases.

The Comatose State. — Grober (*Deut. Med. Wochen.*) states the first step should be to avert immediate danger from the heart or respiration. Then seek to discover the cause of the coma. If due to a poison, an antidote, venesection, stomach pump, vomiting, stimulating kidneys and purging as indicated. These failing, then the treatment can only be expectant and symptomatic. Close supervision must be kept upon circulation and respiration. Where there is paralysis from a poison atropine sometimes restores the muscular tone.

Pulmonary Tuberculosis. — B. Alexander (*Med. Klin.*) since 1889 has advocated systematic injections of camphor in pulmonary tuberculosis to sustain the heart. The dose is 0.1 gm., repeated every day for a month, then dropping to 0.03 or 0.05 gm., keeping this up for months without interruption. Even with a tendency to hemoptysis this answers without morphine. No drugs are required in the first stage of tuberculosis, but where fever keeps up and there is a tendency to hemoptysis and emaciation camphor benefits in every case, no matter how far the case is advanced.

Mucous Colitis.— Alfred Mantle (*Med. Press and Circular*) describes the treatment of mucous colitis as carried out at Harrogate and Plombieres: Treatment by irrigation has been carried out for several years at these places. The object is to wash away any old fecal matter and mucus, and so getting a healthier condition of the mucous membrane. At Harrogate an alkaline sulphur water is used with excellent results. The complete bath is carried out in the following way: It consists of two parts—first, irrigation of the bowel by a hydrostatic douche, given through a long rubber tube which is attached to a long rectal tube. The latter is sterilized by boiling and passed into the rectum. The colon is washed out with 20 to 30 ounces of alkaline sulphur water

at a pressure of two feet, and at a prescribed temperature, usually 105° F., the patient lying for two minutes first on the right side, then on the back, and finally on the left side during the operation. This is repeated, and the ejecta after each douche are carefully examined and reported upon by the skilled attendant. After the internal douche follows a warm immersion bath of sulphur water. When in the bath a hot douche plays upon the wall of the abdomen from a large nozzle with fine perforations, and is chiefly directed over the site of the colon. This bath not only opens out the peripheral circulation, and thus relieves the congested viscera, but is beneficial to the arthritic and nervous manifestations, the result of toxic absorption. Attention on the patient's part to moderate exercise, warm clothing. The use of a hot-water bottle to the cold extremities will give the greatest comfort, and by attracting blood from the splanchnic area to the periphery relieve the affected bowel; great care in diet, avoiding all articles of food which may irritate the mucous membrane, must be strictly enforced. It is only left to say that the treatment of chronic constipation and mucous colitis by this method has been most successful, as well as educational to the patient.

Pneumonia. — H. Leo (*Mün. Med. Wochen.*) experimenting on mice against pneumococcus infection by subcutaneous injections of a saturated aqueous solution of camphor, found that they were protected against infection; in rabbits the results were not so constant. These experiments suggest that camphor should be given from the onset of symptoms in pneumonia. He suggests about 150 to 200 c.c. for a weight of 145 pounds; and he prefers Ringer's fluid to plain water as the vehicle. Seventy-five c.c., corresponding to 0.1 gm. camphor, can be injected intravenously without disturbance. This is supported by Lenzman, who is shortly to publish his experience in this line. Boehncke has already reported favorably on camphor plus pneumococcus serum.

Reviews

A Text-Book of Physiology: for Medical Students and Physicians. By William H. Howell, PhD., M.D., Professor of Physiology, Johns Hopkins University, Baltimore. Fifth Edition Thoroughly Revised. Octavo of 1,020 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, $4.00 net; Half Morocco, $5.50 net. Canadian Agents, The J. F. Hartz Co., Toronto.

The prosecution of active work in physiology and physiological chemistry necessitates up-to-date text-books. Hence the fifth edition of this excellent book is called for. It is one of the best text-books before the student at the present time. Remarkably clear and compact, no significant advance has been overlooked. Medical students will find this book a good one.

The Intervertebral Foramen. An Atlas and Histologic Description of the Intervertebral Foramen and its Adjacent Parts. By Harold Swanberg, Member of the American Association for the advancement of Science. With an Introductory Note by Harris E. Santee, A.M .,Ph.D., M.D. Illustrated by sixteen beautiful full page plates from the highest price half-tone engravings, printed on the most expensive engraver's proving paper. None of these plates have ever before appeared in print, having been especially prepared for this work. The text is printed on the best book paper and contains over 100 pages, size 6 x 9, and is elegantly bound in silk cloth. A splendid product of the printer's art. Chicago Scientific Publishing Co., S.W. Cor. Grace and Osgoode Streets, Chicago, Ill. Price $3.00 postpaid to any address.

Dorland's American Illustrated Medical Dictionary. A new and complete dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Science, Nursing, Biology, and kindred branches; with new and elaborate tables. Seventh revised edition. Edited by W. A. Newman Dorland, M.D. Large octavo of 1,107 pages, with 331 illustrations, 119 in colors. Containing over 5,000 more terms

than the previous edition. Philadelphia and London: W. B. Saunders Company, 1913. Sole Canadian Agents: J. F. Hartz Co., Toronto. Flexible leather, $4.50 net; thumb indexed, $5.00 net.

The rapid advancement in medicine, surgery, pathology and pathologic chemistry during the past few years has brought into being a vast amount of new facts, the result of much investigation and experimentation. As a natural sequence an equally large number of terms and words have been and are constantly being made to describe these. To keep abreast of the records of scientific research, and to make them available to the medical reader, has been no slight task; yet it would seem to have been pretty well accomplished by the editor and his staff in this excellent and exhaustive work. The text and illustrations are clear, and that the work has been published by the W. B. Saunders Co. is a guarantee of its satisfactory craftsmanship. Sole Canadian agents: The J. F. Hartz Co., Ltd., Toronto.

Principles of Surgery. By W. A. Bryan, A.M., M.D., Professor of Surgery and Clinical Surgery at Vanderbilt University, Nashville, Tennessee. Octavo of 677 pages, with 224 original illustrations. Philadelphia and London: W. B. Saunders Company, 1913. Sole Canadian Agents: The J. F. Hartz Co., Ltd., Toronto. Cloth, $4.00 net.

In this work the author's aim, as stated, is to propound the principles of surgery. To our way of thinking, this is the proper procedure to adopt in teaching, more especially junior students of the science. That his teaching, as expressed in this work, will be accepted by all readers without question, is doubtful. Thus, for illustration, the statement that inflammation is essentially a process of repair on the part of nature, and that the "irritant" is the real disease, can scarcely go unchallenged. While from the standpoint of advanced pathology it may be deemed inadequate, Burdon Sanderson's definition can at least claim to serve as an excellent working hypothesis. The staphylococcus aureus may exist as a normal, healthy and virulent organism in a proper culture medium in a test tube, but as such could scarcely be regarded as "a disease"; yet it is an "irritant." And, too, inflammation does not always tend toward spontaneous resolution. It would seem more simple to recognize two processes, destruction (inflammation) and repair (resolution).

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COMMENT FROM MONTH TO MONTH

The Insanitary Moving Picture Theatre and its effects upon people in different ways should receive attention at the hands of medical officers of health, medical inspectors of school children, physicians and oculists.

"The sins of the cinema" are set out by Mr. H. Johnson, the chief sanitary inspector at Wimbledon, as follows: 1. Risk to health through overcrowding and inadequate ventilation. 2. Risk of infection. 3. Risks through insufficient or obstructed exits. 4. Injury to eyesight. To these may be added a fifth—risk to moral cleanliness.

Medical officers of health should satisfy themselves and thus reassure the public as to the proper ventilation of these places. These buildings are filled and refilled time after time. There should be every opportunity of renewing the atmosphere and for cleansing the floors. Their construction should be under vigilant supervision. It should not be lost sight of that physical evils arise through prolonged sessions in rooms, dark or dimly lighted. They are often overheated, and the amount of organic matter in the

atmosphere must be considerable. And what about the increase of CO_2? Does the light of day ever enter; the health-giving properties of sunshine even filter in?

That the risk of infection has ideal conditions seems all too true. Colds and infectious diseases may be easily and readily contracted—there is close contact and very often close and heated atmosphere. One can conceive of a variety of diseases likely to arise in these places if not properly supervised.

It is hoped in our cities and towns the danger to life and serious calamity is minimized through sufficient and unobstructed exits.

There is a long list of objectionable features in a moral sense, demanding constant and unremitting surveillance on the part of a wideawake censor; stealing, murder, drunkenness, indecent suggestions, house-breaking, loose ideas of marriage, domestic infelicity, vicious mischief, kidnapping, etc.

The best side of these cinema theatres is their value in the service of education. Where they can exemplify and depict loftier ideals, they can be made advantage of in the education of true citizenship. In this respect they are now beyond the experimental stage. Certainly they should not be allowed to appeal to the base and sordid.

Aching eyes, headaches, squint, are apt to come in the train of regular attendance, through gazing at quickly moving and flickering films. This, however, is not so marked as formerly. Oculists have issued warnings in regard to these; and this part of the subject alone is one of sufficient seriousness to demand scientific investigation.

If it can be named an industry, it is one which has become strong and powerful in the last decade. There is, therefore, necessity for its proper regulation, as the health of the people must be safeguarded.

Editorial Notes

MOSAIC CIRCUMCISION

(Douglas H. Stewart, M.D., *The American Practitioner.*)

The American Practitioner has been giving much space to the question of circumcision. Probably the majority of the profession approves of it as a sanitary measure. What is the matter, then? Why, simply look at the finger nails of the average mohl and both finger nails and teeth of the old-fashioned mohl and the wonder will become purely a question of how do any children escape infection. My investigation in past years leads me to think that the Jewish race must be very resistant indeed to certain mixed cultures. Perhaps the miseries of Ghetto life may have brought an unlooked for but hard earned compensation.

Many medical friends, both Hebrew and Gentile, seem to be impressed with the idea that circumcision is a Mosaic rite. This is not true, for Moses opposed it even at the risk of his life, and would not circumcise anyone. It was derived from Abraham, and Moses omitted and neglected its performance.

I have had this statement questioned by rabbi, priest and doctor, but have always made good upon it by reference to the records as they stand in the Hebrew and Greek scriptures.

This is what the records say: Christ states—Ye have not circumcision from Moses, but from the Fathers (Abraham). Moses refused to circumcise his own son, did not circumcise any of the hundreds of thousands of children born during the forty years in the desert, and Joshua circumcised them all with stone knives. Stupid persons invariably jump to the conclusion that the rite was omitted because the people were marching all the time. The facts are: It took forty years to cross a four hundred mile desert; over a half million births (and funerals) occurred, and if the cloud abode the people stayed till "a day, a month, a year or a longer time."

That no mention is made of anything like sepsis when many hundred thousand adults and children were circumcised with stone knives rather confirms my experience that Jewish children are quite proof against the usual septic sequellae which dirty finger nails and unboiled instruments would lead one to anticipate.

As to the rite, that great lawgiver and sanitarian, Moses, would have none of it. He was versed in all the wisdom of the Egyptians, quite a different thing from the practice of any Arabian rite. He must have marvelled as we do—" How can a mohl (whose hands, we know, must show mixed and virulent cultures) tear up the preputial mucous membrane and the child escape infection." Substitute the word plague for infection and the idea will be clear, since there is small difference between a plague of sores and septicemia. That the child commonly does escape proves that the race is protected in some way from rock knives and dirty finger nails. Bacteriology has its supernatural, and this immunity is one of its miracles.

THE PNEUMONIA DANGER IN SOUTH AFRICA

For a long time the excessive pneumonia prevalent among workers in the Rand mines has caused much anxiety, and has also deterred many from seeking employment in the district. At the invitation of the Rand Native Labor Association, Sir Almroth Wright has carried out important investigations, in which the treatment accorded to patients was considered, as well as probable causes of the disease. A report has just been issued, the most arresting portion of which has reference to the use of drugs in the treatment of disease. Sir Almroth lays down certain propositions worthy of attention, namely, that the empirical method of administering a drug "concerning which we have neither *a priori* grounds for believing that it will, nor evidence to show that it does, do what is intended" is unscientific. This applied with special force to a drug intended to destroy microbes. In that case it was necessary to determine, in order—(1) the effect on the particular microbe of graduated dilutions of the drug in water and in blood serum; (2) the effect on animals, both as regards rendering them immune from infection and curing them when infected; further, whether the blood of an animal treated and cured developed any resistance to the microbe—as would occur if recovery took place without the use of drugs; (3) the effect on normal men artificially inoculated with the microbe, and on men actually suffering from the disease—the native powers of the blood being ascertained before and after administration in each instance. A comparison could then be made between the course of a treated and the course of an untreated case and definite conclusions arrived at. A drug could not be described as successful which,

while it destroyed bacteria, at the same time injured the "nobler structures" harboring them. If the normal power of the blood to develop specific antidotes was interfered with, or if the white blood corpuscles, the "army of protection," were rendered less active than usual, the drug stood condemned, no matter how great its merits in other directions. Ehrlich has taught the world that drug administration might, indeed must be, reduced to a science. The older physicians seemed to have proceeded upon the assumption that any antiseptic, given in such doses as the patient could tolerate, must exert a check upon the growth of microbes in the body. "They were satisfied not only themselves to proceed upon that faith, but to hand it down as a dogma to future generations until it perhaps might, in the fullness of time, appear whether any good had really come of the treatment." That method could no longer be tolerated. An absolutely scientific drug, for example salvarsan, "606," attacked a specific organism only. It combined with the protoplasm of that organism to form a new innocuous chemical compound. It did not injure the patient's tissues in any way, nor inhibit the powers of the blood serum. Finally, it passed successfully the test of a control experiment—that is to say—of comparison of its action with the course of an untreated case of the disease.

Is Another Revolution Imminent?

We have given this lengthy summary of Sir Almroth Wright's report because it foreshadows a revolution second only in importance to that which occurred when the letting out of blood was abolished in favor of drug treatment. As *The Times* properly points out, it is not sufficient to pour a drug into the human body with the object of destroying bacteria; there must be some regard as to the possibility of the drug destroying life itself. Hence it is necessary that knowledge of the power or effect of drugs must be increased. For this purpose it is claimed that the effect of a drug must in all cases be tested before it is administered, and, further, that it can only be tested by means of a control experiment—that is to say, by comparison of its action with the course of an untreated case of the disease which it is required to cure. "To obtain recognition," says our contemporary, "a drug must be specific in the true sense; it must be proved that it attacks the disease and at the same time leaves the patient unharmed. The number of drugs that have been tested in this way is, it is safe to say, comparatively small. But there can be no doubt that the pharmacy of the

future will be governed by control experiments, and that gradually a new system of medicine will be built up in which tests of this nature will be the universal rule. By this means a true knowledge of the effect of drugs will be arrived at, though their application must always be governed by the fact that the effects vary with different individuals." The field here presented for investigation is vast indeed, but medical science must not shrink from the task. In our anxiety for "preventive" progress we must not neglect curative means, nor must we accept every claim put forth by the discoverer of a new "drug." It must be tested in all its effects before it can be used with perfect safety.—*The Sanitary Record and Municipal Engineering.*

NAPOLEON'S DEATH

(Int. Med. Congress.)

Old controversies were revived and new theories advanced when the section devoted to the "History of Medicine" considered two papers dealing with the death of Napoleon Bonaparte. Dr. Guthrie read an interesting and detailed paper, in which he asked the question, "Did Napoleon suffer from hypopituitarism at the close of his lifetime?" This condition is one to which medical science has only recently turned its attention; it has relation to the pituitary gland in the brain, whose functions are not at present fully known.

Dr. Guthrie discussed the condition of Napoleon in the closing years of his life, and pointed out the gradual decay of his mental faculties; his increasing lassitude, fatigue, and prostration; the increase of corpulence and chilliness, and lowered bodily temperature (indicated by the exile's frequent recourse to hot baths in a temperate climate). These symptoms were not entirely explained by the disease from which he was supposed to have suffered, and pointed to the presence of hypopituitarism.

It was pitiful, said Dr. Guthrie, to trace the mental decadence of this mental giant. Napoleon became a bore, and in the last five years of his life degenerated into a pettish, querulous, and irritable old man. These things pointed to some trouble of a cerebral nature. The brain, he added, was never examined at the post-mortem, and this theory he advanced was one that could never be definitely determined.

Questions For Consideration.

Dr. Chaplin, in a paper on "The Fatal Illness of Napoleon," asked the members of the historical section to consider themselves in the position of a tribunal or commission, called together to consider the following questions:

1. What were the diseases from which Napoleon suffered during his detention on the Island of St. Helena?

2. What were the probable causes of those maladies?

3. How far did the post-mortem examination substantiate the clinical evidence of those diseases?

The medical evidence was to be found in books or reports furnished by eight medical men—O'Meara, Stokoe, Antommarchi, Arnott, Shortt, Henry, Rutledge and Burton. The last four were present at the post-mortem only.

Up to the end of 1817 O'Meara, who was in attendance on Napoleon, attributed his illness largely to his invincible determination to live a life devoid of exercise, and calculated to break most of the ordinary rules of health.

Antommarchi arrived at St. Helena in September, 1819, and set himself to the task of attempting to break down his patient's repugnance to fresh air. This he succeeded in doing, and by the end of October was able to describe his patient as well.

Change in Symptoms.

After various relapses and attacks symptoms began to appear in September, 1820, which pointed unmistakably to a serious disease in the alimentary tract. By the end of March, 1821, the case was hopeless, but he lingered on, becoming steadily worse, until May 5, 1821, when he died at eleven minutes to six in the evening. The change in the symptoms in September, 1820, might be fairly attributed to the beginning of the cancer of the stomach which eventually caused his death.

His second premise was based on the contention that during the three and a half years that Napoleon was ill the symptoms exhibited corresponded in the main to those of undulant fever, a condition which would have produced the appearances found in the specimens of the small intestines in the Museum of the Royal College of Surgeons.

But if there appeared to be little doubt that the ultimate cause of Napoleon's death was cancer, there are still the symptoms from which he suffered during life to be considered, some of which were not in accordance with those of gastric cancer. It had been sug-

gested that inflammation of the liver (hepatitis) existed for three years and a half, and there was a direct conflict of evidence on the point as to whether the post-mortem examination disclosed any signs of hepatitis. Of the eight doctors present Antommarchi alone describes the liver as being affected.

Motives for stating certain facts were of no assistance, because both Antommarchi and the seven British doctors were biassed, the former to support the climatic contentions of the Frenchmen and the latter in support of the British authorities, with their negation of any climatic influences whatsoever.

Professor Arthur Keith had propounded the view that Napoleon's indisposition was due to an endemic form of disease dependent on particular climatic conditions in the island of St. Helena.

Relic of Napoleon.

He rested his thesis, said Dr. Chaplin, on two main premises. The first premise was based on his contention that two specimens of small intestine exhibited in the Museum of the Royal College of Surgeons, and described, "Incipient fungus of the glands of the small intestine, Napoleon, Barry O'Meara to Sir Astley Cooper," did, in fact, come from the body of the Emperor. On submitting these specimens to microscopic examination, Professor Keith found that the so-called incipient fungus was not cancer at all, but inflammatory in nature, and, indeed, what one would expect to find in a man who had been affected for a long period with chronic undulant fever.

News Items

Dr. A. G. Morphy, Montreal, has sailed for Naples and Genoa.

Dr. J. J. Mason, formerly of London, Ontario, has moved to Vancouver.

Calgary, Alta., is planning to build a tuberculosis hospital at a cost of $30,000.

Dr. Samuel Johnston, Toronto, has returned from a holiday at Old Point Comfort.

Dr. Bliss S. Thorne, Havelock, N.B., died on the 26th of January, aged 71 years.

The total number of deaths in St. John, N.B., in 1913 was 824, as against 741 for 1912.

Dr. George Sterling Ryerson, Toronto, has been elected President of the Canadian Red Cross Society.

Dr. Charles S. Minot, Harvard University, attended the annual banquet of McGill medical faculty and students.

Robert C. Young, M.D., McGill, 1873, died at his home in Detroit in November, aged 63. From 1874 to 1911 he practised at Ridgetown, Ont.

Dr. G. S. Beck, Port Arthur, died in Toronto, January 12th, aged 54 years. He was graduated from Trinity University in 1881. He had not been in good health for a number of years.

The Tranquille (B.C.) Sanatorium has to face a deficit of $15,000. It is proposed to construct a new building at a cost of $100,000; and the Provincial Government is being asked for additional assistance.

Dr. Montizambert has appointed Drs. H. R. Elliott and F. W. E. Wilson, Niagara Falls, Ont., quarantine officers, in connection with safeguarding against the introduction of smallpox from Niagara Falls, N.Y.

By the will of the late Lord Strathcona the Royal Victoria College for Women is the only department of McGill University to benefit, but during his lifetime he gave $850,000 to the medical faculty, $50,000 to the pension fund, and $25,000, which made possible Strathcona Hall.

Verdun Protestant Hospital, Quebec, treated 477 men and 433 women during the past hospital year. There were 247 admissions, and of the 151 discharged, 74 had recovered, 45 improved and 32 unimproved, leaving in the institution at the end of the year 665 patients.

Volume XXVI. of E. Merck's Annual Report of Recent Advances in Pharmaceutical Chemistry and Therapeutics.

This latest issue is even larger than last year's. The first article is a most instructive discussion on Lecithin, in which is brought out a good many not generally known uses for this valuable remedy. The volume is also supplemented by a timely article by Professor Dr. R. Heinz, of the Pharmacological Institute of the University of Erlangen, on the "Standardization of Digitalis Preparations."

The edition is limited, and is distributed principally among teachers of materia medica and therapeutics, and medical and pharmaceutical libraries. Generally, however, a few copies of each issue are left over after this special distribution, and physicians and pharmacists who make early application can obtain a copy by remitting the forwarding charges of fifteen cents, in stamps—no charge being made for the volume itself.

Merck & Co., 28 St. Sulpice St., Montreal.

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Original Articles

THE MODERN TREATMENT OF GASTRIC DISEASE*

By Herbert J. Patterson, M.A., M.C., M.B. (Cantab), F.R.C.S.

Mr. President and Gentlemen,—

Will you allow me first of all to say how much I appreciate the honor conferred on me by the invitation of your President to come and address you. It is easy to accept such an invitation, but quite another matter to prepare an address worthy of such an audience as I know from experience one meets in this New World.

In the year 1876, Gussenbauer and Von Winiwarter, as the result of experiments on dogs, came to the conclusion "that the surfaces of the stomach have a real tendency towards union by first intention, just as have wounds of the skin." They little imagined what paths were opened up by this simple observation, which seems so obvious to us. Without exaggeration these pioneers may be described as the heralds of gastric surgery, which at that time was a closed book in the history of medicine.

Their work soon bore fruit. In the year 1881, Billroth performed the first pylorectomy on a human being, followed by recovery. This year, indeed, was a landmark in the progress of gastric surgery, for, in addition to Billroth's brilliant success, the operation of gastro-jejunostomy was performed for the first time by Wolfler, at the suggestion of Nicoladoni. It may be regarded as the birth year of the surgery of the stomach.

Since those early days, gastric surgery has been a child of rapid growth. It is, indeed, difficult to realize how great has been the progress, even within the short time compassed by my

* Delivered before the Academy of Medicine, Toronto, November 24th, 1913.

own experience. I well remember how, one night, when I was house surgeon, just under twenty years ago, the whole resident staff were assembled in consultation over an obscure case. The patient, a man aged forty years, had been seized with severe abdominal pains a few hours before admission. His face bore witness to the intensity of his sufferings. There were beads of perspiration on his forehead. His breathing was short and shallow, and his replies to questions couched in short, jerky sentences. His pulse was quickened slightly, and his temperature just above normal. He referred his pain to the whole abdomen and the lower part of the chest. There was no abdominal distension, but some rigidity in the upper part. We all examined him, and the number of different diagnoses made about corresponded to the number of those who took part in the consultation. Peritonitis was excluded by the absence of abdominal distension and by the absence of marked increase in pulse rate. One daring spirit suggested bleeding. His boldness and originality carried the day, and the patient was bled to the extent of ten or twelve ounces. At the post-mortem next day a perforated ulcer of the duodenum was discovered. It is scarcely too much to say that at the present time the man's life would have been saved by surgical treatment. To us to-day it seems almost incredible that the nature of an illness presenting such a clear-cut and well-recognized clinical picture as this should not even have been suspected. The recital sounds more like an episode in the dark ages than an occurrence in a London hospital, near the close of the nineteenth century. The thought of what posterity may think of us should ever keep us humble. This patient was a victim to the pathology of the dead-house. At that time only final stages of abdominal diseases were seen, and these end results formed the basis of pathology. Little or nothing was known of the early pathology of such cases, and consequently the corresponding symptoms were unknown. Of duodenal ulcer little was known. Gastric ulcer was supposed to be uncommon except as a disease of young womanhood.

Probably in no department of medicine has surgical activity led to greater accuracy of diagnosis than has been the case in diseases of the stomach. Twenty years ago operative treatment was undertaken only as a last resort. All our knowledge of gastric pathology was derived from the post-mortem room, or from an occasional operation undertaken when the patient had one foot in the grave. As surgical technique was improved, surgeons grew bolder and more enterprising, and so knowledge was accumulated as to the conditions present at earlier stages

of gastric disease. The pathology of the dead-house was succeeded by the pathology of the operation theatre. Operation revealed the early stages of the troubles which gave rise to the symptoms for which the patient sought relief, and so by degrees the surgeon was enabled to compose a clinical picture of the symptoms caused by the various organic lesions found.

Modern methods of gastric diagnosis are of composite growth, the clinician, the surgeon, the chemist, the physiologist, the bacteriologist and the radiographer, all have contributed their quota to the store of knowledge.

We must be satisfied no longer with such vague diagnoses as hyperchlorhydria, acid dyspepsia, nervous dyspepsia, and gastralgia, high-sounding phrases whose only use is as a cloak for lack of knowledge. These terms signify symptoms, not diseases, and as guides to successful treatment are of less value than the old labels on our baggage, for these at least are reminiscences of former trips.

The introduction of the test meal has enabled us to study the gastric functions in health and disease, and incidentally has shown us how misleading such descriptions are. I have seen many patients whose disease has been diagnosed as acid dyspepsia, analysis of whose gastric contents showed not only entire absence of free hydrochloric acid, but also diminished acidity.

A good many years ago I operated on a man who had gastric symptoms, due to chronic appendicular disease. I removed his appendix, and as he had extreme hyperchlorhydria, I performed, unwisely as I now know, a gastro-jejunostomy. Before operation, with extreme hyperacidity, he did not notice any acidity, after operation he complained bitterly of a "burning acidity," although analysis of his gastric contents showed hypoacidity and absence of free hydrochloric acid. Later, I restored the continuity of the alimentary canal, the acidity increased, the free hydrochloric acid was restored, but his symptoms of acidity disappeared.

In the vast majority of cases acid dyspepsia and the like are the symptoms of definite organic disease. It is perhaps no exaggeration to say that eighty-five per cent. of cases of persistent gastric trouble are due to obvious lesions, not necessarily in the stomach, but somewhere in the abdomen. What about the remaining fifteen per cent?

It is remarkable how, within recent years, fresh sources of persistent dyspepsia have been discovered. In the early days if ex-

ploration of the stomach and duodenum revealed no lesion, surgery was helpless. Since the discovery of the role of cholelithiasis and appendicular disease in the causation of gastric disturbances, the true nature of many cases, hitherto obscure, has been cleared up. Now the brilliant work of Sir Arbuthnot Lane has thrown further light in dark places, and it is now clear that in many cases hitherto obscure the *fons et origo mali* is intestinal toxemia. This condition accounts for a considerable proportion of the 15 per cent. of cases to which I have alluded, so that at the present day the proportion of cases is small in which there is not a definite, ascertainable cause for persistent gastric symptoms.

It is a matter for wonder why so limited a use is made of gastric analysis in the investigation of gastric disease. Is it not true that a practitioner will treat for weeks or months a patient suffering from gastric trouble without the slightest knowledge of the condition of affairs within the stomach. He does not know whether there is an increase or a decrease of the gastric acidity, whether or not there is bleeding, whether the evacuation of the stomach is hastened or delayed, whether or not the peptic activity of the gastric glands is impaired. Under such circumstances how can treatment be otherwise than purely empirical. Would any practitioner prescribe spectacles merely after listening to a recital of the patient's symptoms? Why should the stomach be treated with less courtesy than the eyes? I would say emphatically that the stomach tube should be part of the routine of gastric diagnosis. At the same time I would point out that gastric analysis has its limitations. Laboratory investigations are an aid, not a substitute, for clinical work. No diagnosis should be based solely on a chemical examination, but if the results be interpreted in the light of the clinical history, investigation of the motor activity and of the gastric secretions is a great help.

In gastric work, at any rate, the surgeon must be a clinician as well as skilled in handicraft. The surgeon is not a mere carpenter to perform a task outlined by others. He himself should make his own diagnosis and form his own judgment as to the advisability or otherwise of operative treatment. He should carry out his own laboratory investigations, for it is only by so doing that he can gain the knowledge to enable him to make the best use of what chemical pathology can teach. The surgeon should be a physician who has developed his brain so that it reaches to his finger tips. It is impossible to lay down hard and fast rules as to the relation of the different lesions found to the chemical alteration of the gastric contents. With

experience, however, one can "read" the analyses, and so use them in coming to a conclusion as to the nature of the patient's trouble. Here, for instance, is an analysis from a case of duodenal ulcer:—

GASTRIC ANALYSIS.

Duodenal Ulcer.

Total acidity	80.
Total Chlorides	0.405
Free HCl	0.055
Protein HCl	0.275
Mineral Chlorides	0.075

You will observe the high total acidity, the high total chlorides, the great excess of free hydrochloric acid, the high protein hydrochloric acid, with a normal or lessened amount of mineral chlorides. Such an analysis is typical of duodenal ulcer. I know of no condition likely to be associated with such an analysis, with the exception that occasionally in gastric ulcer close to the pylorus, a somewhat similar analysis may be found. In a case of this sort, with a clinical history of pain coming on two or three hours after food, one would be able to assert with confidence the existence of a duodenal ulcer.

In less typical analyses the diagnosis may be less easy. Take such an analysis as the following:—

GASTRIC ANALYSIS.

D. U. Pyloric obstruc. Cholelithiasis.

Total acidity	78.
Total Chlorides	0.355
Free HCl	0.000
Protein HCl	0.235
Mineral Chlorides	0.120

In this case you will observe that there is no free hydrochloric acid. The total acidity, however, is high, as are the total chlorides, and the protein hydrochloric acid is not diminished. If the absence of free hydrochloric acid were due to chronic gastritis or carcinoma, we should expect a marked diminution both in the total acidity and in the total chlorides, as well as in the protein hydrochloric acid.

Carcinoma, therefore, was excluded. In duodenal ulcer free hydrochloric acid may be diminished or absent:—(1) In between

the attacks, (2) when the ulcer is healed, (3) if the ulcer has produced partial obstruction, (4) if there be marked intestinal stasis or appendicular disease. As the patient gave a history of typical attacks of duodenal ulcer pain, it was surmised that she had a duodenal ulcer, but that either the ulcer was becoming cicatrized and so producing partial obstruction, or that she had appendicular disease. At the operation it was found that she had a gall-stone, a puckered ulcer of the duodenum producing partial obstruction.

I give these two analyses as illustrations of the conditions under which gastric analyses must be interpreted.

Here is an analysis from a case of gastric ulcer close to the pylorus.

GASTRIC ANALYSIS.

Gastric Ulcer close to Pylorus.

Total acidity	75.
Total Chlorides	0.325
Free HCl	0.040
Protein HCl	0.205
Mineral Chlorides	0.080

This analysis is very similar to that which I have shown you from a case of duodenal ulcer. My experience is that it is often impossible, either by the clinical history or by gastric analysis, to differentiate a gastric ulcer, close to the pylorus, from a duodenal ulcer.

In gastric ulcers of the lesser curvature, or of the body of the stomach, the free hydrochloric acid is rarely so high as in ulcer near the pylorus. The following is an illustration:—

GASTRIC ANALYSIS.

G. U. about middle of Stomach.

Total acidity	78.
Total Chlorides	0.308
Free HCl	0.025
Protein HCl	0.206
Mineral Chlorides	0.077

Here you see that there is a slight increase of free hydrochloric acid, while both the total chlorides and protein hydrochloric acid are less than in the cases of duodenal ulcer and gastric ulcer near to the pylorus.

Probably the free hydrochloric acid always is increased in the early stage of gastric ulcer. Later there is a progressive diminution, so that when marked pyloric stenosis is present, free hydrochloric acid may be absent entirely.

Here is an analysis from a case of hour-glass stomach:—

GASTRIC ANALYSIS.

Hour-glass Stomach.

Total acidity	70.
Total Chlorides	0.332
Free HCl	0.000
Protein HCl	0.230
Mineral Chlorides	0.098

You will notice the absence of free hydrochloric acid. I have never found any free hydrochloric acid present in the gastric contents in a case of hour-glass stomach. This is an important truth, as the absence of free hydrochloric acid leads frequently to a diagnosis of malignant disease. At first sight the absence of free hydrochloric acid is difficult to explain. The oxyntic cells are in the cardiac end of the stomach, and therefore we should expect that free hydrochloric acid would be secreted as usual. Possibly the explanation is that the gastric hormone which is secreted in the pyloric pouch does not reach the cardiac end of the stomach, and so the oxyntic cells are not stimulated into activity.

In this analysis, although there is no free hydrochloric acid, the total acidity is not very low, and the total chlorides and protein hydrochloric acid are not diminished. Compare the analysis with one from a case of gastric carcinoma:—

GASTRIC ANALYSIS.

Gastric Carcinoma.

Total acidity	28.
Total Chlorides	0.178
Free HCl	0.000
Protein HCl	0.051
Mineral Chlorides	0.124

Here you see not only the absence of free hydrochloric acid, but a marked fall in the total acidity and diminution of the total chlorides and a very marked and characteristic lowering of

the protein hydrochloric acid. The mineral chlorides are increased.

With the gastric symptoms of appendicular disease or of intestinal toxemia, there is usually a marked diminution, or absence, of free hydrochloric acid with a diminution of all the constituents of the gastric contents.

GASTRIC ANALYSIS.

Appendicular Gastralgia.

Total acidity	61.
Total Chlorides	0.288
Free HCl	0.007
Protein HCl	0.201
Mineral Chlorides	0.080

Radiography affords much help in diagnosis, and is destined to be of even greater service. At first only such gross lesions as pyloric stenosis and hour-glass stomach were demonstrated, but recently, with refinements of technique, some experts can detect a single ulcer and the early beginnings of gastric carcinoma.

GASTRIC ULCER.

Not one of the least interesting results of gastric surgery is the extent to which our views as to the frequency and sex incidence of gastric ulcer have been modified. Formerly it was believed that gastric ulcer was a very common affection in young women. Twenty years ago, for every man diagnosed as suffering from gastric ulcer, nine women were similarly classified. When in later years such cases came to be investigated on the operation table, it was soon found that there was a great discrepancy between clinical diagnosis and the operation findings.

It is of interest to note that in later years, as shown in the accompanying chart, physicians appear to have been less ready to diagnose gastric ulcer in women, at any rate the ratio has fallen until in 1911 the ratio of men to women was 1 to 1¼, instead of 1 to 9.

CHART.

This is more in accordance with the operation findings. From cases verified by operation I have found 117 men to 114 women. How did this error in diagnosis arise? How are the symptoms, so suggestive of gastric ulcer, produced? In many instances the appendix is at fault. The symptoms are gastric, but the lesion

is in the appendix, a condition for which I have suggested the term appendicular gastralgia.

When I was at Rochester for the first time, I saw Dr. W. J. Mayo remove an appendix which he believed to be the cause of the gastric symptoms from which the patient was suffering. I confess that at the time I was very sceptical as to the causal relation of the appendix to the gastric symptoms. My scepticism has long been silenced. I can give you an interesting proof of the influence which removal of the appendix has on the gastric functions. As I have pointed out before, there is often complete absence of free hydrochloric acid in the gastric contents. Now after appendicectomy frequently there is an immediate restoration of free hydrochloric acid in the gastric contents, as is shown in the following analysis:—

GASTRIC ANALYSIS.

Appendicular Gastralgia.
(intest. stasis.)

Total acidity	52.
Total Chlorides	0.250
Free HCl	0.000
Protein HCl	0.167
Mineral Chlorides	0.083

After Appendicectomy.

Total acidity	72.
Total Chlorides	0.368
Free HCl	0.014
Protein HCl	0.270
Mineral Chlorides	0.083

The absence of free hydrochloric acid has been attributed to inflammatory changes in the gastric mucosa as a consequence of delay and stagnation of the food in the stomach. This explanation does not seem to be satisfactory. If the absence of free hydrochloric acid were due to this cause it is difficult to see how, after operation, there could be an immediate restoration of the secretion of free hydrochloric acid. This observation is a very striking one and puzzled me for several years. I used to think that the absence of free hydrochloric acid might be the result of spasmodic stenosis of the pylorus, secondary to irritation of the diseased appendix, and that the removal of the appendix led

to the cessation of the spasm and renewal of the secretion of free hydrochloric acid.

This view is disproved by the absence of pyloric spasm on X-ray examination and also to some extent by the observation that electrical stimulation of the appendix has no visible effect on the pylorus. I believe that the diminution or absence of free hydrochloric acid is due to the presence of some toxin in the blood. Where does the toxin come from? Possibly from the appendix, but more probably from the intestine.

Apart from appendicular disease we may see the same absence of free hydrochloric acid in the gastric contents in cases of intestinal stasis and the same restoration of free hydrochloric acid after ileo-colostomy. This suggests that the absorption of toxins is the result of intestinal stasis. The intestinal stasis may be secondary to definite kinks or bands at the terminal portion of the ileum, which cause mechanical obstruction. Bands are met with also at the hepatic and splenic flexures of the colon, and in the sigmoid. In other cases there is no obvious lesion but the diseased appendix, sometimes there seems little wrong with this vestigial organ, except that it harbors a concretion. How can we explain the stasis in these cases? In some of them, as pointed out by Sir Arbuthnot Lane, the appendix forms a kind of ligament controlling the effluent to the cecum. In many cases I believe stasis is due to spasm of the appendix spreading to the outlet of the ileum.

It is noteworthy that in many of the cases the appendix contains a concretion, or some putrid feces. I believe the spasm is due to the efforts of the appendix to empty itself. While operating on such cases I have many times observed the appendix writhe vigorously when touched.

The hypothesis that diminution or absence of free hydrochloric acid in the gastric contents is due to absorption of toxins from the alimentary canal, explains in a reasonable manner the immediate restoration of the secretion of free hydrochloric acid by the gastric mucosa after appendicectomy or ileo-colostomy.

We may go still further, the absorption of toxins leads to hyper-secretion in the stomach, and in time may cause a toxic gastritis. The gastric mucosa becomes inflamed and bleeds easily, a condition known as gastrotaxis. I have many times examined the interior of a stomach of a patient suffering from appendicular disease and have seen numerous bleeding points in the mucosa. In several instances on examining a piece of the mucosa microscopically I have been able to see the blood corpuscles escaping between the epithelial cells.

Thus we get hematemesis in patients who are suffering, not from gastric ulcer, but from a diseased appendix. It is quite possible that this condition of the mucosa is the prelude to definite ulceration.

Many years ago I pointed out the frequent association of appendicular disease with duodenal ulcer, and suggested that the relation was one of cause and effect. Now, thanks to the suggestive work of Sir Arbuthnot Lane, we can explain why the appendix leads to ulceration. There is much ground for the belief that all gastric and duodenal ulcers are due to absorption of toxins from the alimentary canal.

Now we can understand why in former times gastric ulcer was diagnosed so frequently. The majority of the women who have symptoms of gastric ulcer are really suffering from a toxemia secondary to intestinal stasis. The gastric symptoms are due to interference with the gastric secretions. Gastric ulcer is not nearly as common a disease as was supposed. I find that I operate on two duodenal ulcers for one gastric ulcer.

All are agreed as to the advisability of prolonged medical treatment before any operation for gastric ulcer is undertaken. By prolonged medical treatment I mean at least six weeks in bed on a milk diet, and six weeks with comparative rest on a milk diet. Under such treatment I have had a number of private patients completely relieved, but with hospital patients such treatment is almost impossible to carry out, as it is so difficult to make the patients realize the importance of careful diet, that relapse ensues in something like 75 per cent. of hospital patients.

As regarding surgical treatment there are at present two opposing schools, those who advocate gastro-jejunostomy and those who advise excision. This is an instance of the swing of the pendulum, for the first operation for the cure of a gastric ulcer was a resection performed by Rydygier in 1881. Twelve years later Doyen substituted gastro-jejunostomy for excision. At first the results of gastro-jejunostomy were brilliantly successful, but later it was found that the results, when there was no pyloric stenosis, proved less satisfactory than operation in cases in which stenosis existed. It was thought that in cases of patent pylorus, the food continued to pass through the pylorus, so the anastomotic opening, being functionless, closed up. Some surgeons, therefore, advocated deliberate occlusion of the pylorus, so as to keep the gastro-jejunostomy opening patent. It is more than probable that the failures were due, not to closure of the anastomotic opening, but because gastro-jejunostomy was performed without proper in-

dication. If a patient requires a gastro-jejunostomy, benefit will ensue whether the pylorus be excluded or not. If gastro-jejunostomy be not indicated, the additional closure of the pylorus will not make an unnecessary operation a good one.

Within the last few years treatment by excision has been revived. Those who advocate it argue that gastro-jejunostomy is a drainage operation, and then unless there be pyloric stenosis, it is useless, as the food continues to pass through the patent pylorus, and not through the new opening. In other words the drain does not act. I believe this teaching to be erroneous.

Gastro-jejunostomy is a physiological, not a mechanical, operation. Its beneficial effects are due to its influence on the gastric contents and not to drainage. Let me indicate very briefly my reasons for this belief.

In the first place if gastro-jejunostomy is a drainage operation, then, unless it hastens the evacuation of the stomach, it will not have a beneficial effect. This is not the case, as the result of operation may be to retard evacuation and yet the patient is completely relieved. How then does gastro-jejunostomy act? I believe the important factor is the regurgitation, into the stomach, of small quantities of bile and pancreatic juice, which diminish the acidity, and may also have other effects. I believe this regurgitation is constant, even though bile cannot be demonstrated in the gastric contents by ordinary tests, and put very briefly the proof of this is as follows:

(1) There is a constant increase of mineral chlorides after gastro-jejunostomy.

(2) This increase is not due to increased activity of the gastric mucosa, because there is usually a diminution of the total chlorides.

Therefore the increase in mineral chlorides must be due to some addition to the gastric contents from without, i.e., to bile and pancreatic juice which regurgitate through the anastomosis. If this is so, then the increase in mineral chlorides after gastro-jejunostomy should disappear if the gastro-jejunostomy be undone. That this is so is shown in the following case:

GASTRIC ANALYSIS.

Before Gastro-jejunostomy.

Total Chlorides	0.420
Free HCl	0.051
Protein HCl	0.289
Mineral Chlorides	0.080

After Gastro-jejunostomy.

Total Chlorides	0.365
Free HCl	0.000
Protein HCl	0.153
Mineral Chlorides	0.211

After Undoing Gastro-jejunostomy.

Total Chlorides	0.343
Free HCl	0.018
Protein HCl	0.270
Mineral Chlorides	0.055

If an entero-anastomosis be performed as well as gastro-jejunostomy, then this increase does not occur.

GASTRIC ANALYSIS.

Before Gastro-jejunostomy.

Total Chlorides	0.335
Free HCl	0.003
Protein HCl	0.175
Mineral Chlorides	0.156

After Gastro-jejunostomy and Entero-anastomosis.

Total Chlorides	0.350
Free HCl	0.000
Protein HCl	0.226
Mineral Chlorides	0.124

This increase in mineral chlorides is more marked if there is excess of bile in the gastric contents.

This increase in mineral chlorides does not occur as a rule after operations other than gastro-jejunostomy.

Therefore gastro-jejunostomy is indicated in any case of chronic ulcer which resists medical treatment, whatever the situation of the ulcer. Latterly, the advocates of excision have shifted their ground. Now they allege that a large proportion of gastric carcinomata have their origin in simple ulcer, and that therefore excision should be performed to prevent occurrence of cancer. I do not think the grounds on which this teaching is based are very convincing. If this hypothesis be correct, gastro-jejunostomy must be performed frequently for ulcers which are already malignant. Why, then, is it so rare an event for a patient to die from cancer

after gastro-jejunostomy for supposed simple ulcer? When a mistake is made it is more likely to be a mistake in the opposite direction. It is the supposed malignant case which proves to be innocent.

My experience coincides with that of Professor Kocher and Dr. Gressot that malignant degeneration of simple ulcer after gastro-jejunostomy is a rare event.

Gastro-jejunostomy is the safer operation, and relapse is less common than after excision. The chief objection to excision is, that it removes the ulcer, but does not influence the causal factors of ulceration. Gastro-jejunostomy, therefore, should be the operation of choice, because it is a physiological operation and so alters the gastric contents as to promote healing of the ulcer.

Hour-glass stomach is a condition which is often mistaken for cancer, owing to the absence of free hydrochloric acid in the gastric contents, and to the extreme degree of emaciation to which the patients are reduced. Even after opening the abdomen the condition may be unrecognized, as in the exterior of the stomach there might be little indication of the serious constriction which exists within.

Gastro-jejunostomy in the proximal pouch is the most satisfactory treatment. Gastroplasty and gastrostomy, unless performed in combination with gastro-jejunostomy, are followed by relapse in a large proportion of the cases. A gastro-jejunostomy alone is sufficient.

If there be pyloric stenosis or a double hour-glass stomach, it may be necessary to anastomose the jejunum to the stomach, on both sides of the constriction, so that both pouches may be drained efficiently.

DUODENAL ULCER.

In the vast majority of cases the diagnosis of duodenal ulcer can be made from the history given by the patient. There are, however, a few cases in which the history is typical, but no duodenal ulcer is discovered. Usually in such cases there is a diseased appendix, and possibly a duodenal ulcer, not sufficiently indurated to be palpable without opening the duodenum. I have met with one such case.

In duodenal ulcer hyperchlorhydria is the rule, and when this condition is present, coupled with the typical history, we may be confident as to the diagnosis.

In duodenal ulcer the indication for surgical treatment is much more definite than in gastric ulcer. We know that a gas-

tric ulcer may cicatrize and give rise to no further trouble. In duodenal ulcer such a favorable issue is rare, if indeed it occur at all. My experience is that when once a patient has marked symptoms of duodenal ulcer, recurrent attacks of pain coming on two hours or more after food, and accompanied by hyperchlorhydria, he will be subjected to periodic returns of symptoms until surgical treatment be adopted. Dieting, medical treatment and gastric lavage will give relief, but will not bring about a cure. Gastro-jejunostomy is the operation of choice.

Severe pain radiating to the back is a strong indication for operation, as generally it means that the ulcer has become adherent to the liver or pancreas, and that the ulceration is progressive.

With regard to the treatment of hemorrhage from gastric and duodenal ulcers, I doubt whether it is ever expedient to operate during the progress of the hemorrhage.

So far as I can gather from hospital statistics, operation during hemorrhage is attended with a mortality of at least 50 or 60 per cent., while of all gastric or duodenal ulcers which bleed, the mortality is not greater than 5 per cent. It appears, therefore, that of those patients who have gastric or duodenal ulcers which cause recognizable hemorrhage, one in twenty dies, whereas of those submitted to operation one out of every two dies. In other words, if a patient is operated on for gastric hemorrhage during the attack, the chances are two to one that the result will be fatal; whereas, if no operation be done, the chances are twenty to one in his favor. And even as regards those patients who are operated on and recover, I think we are entitled to ask in the words of Sir James Paget, "What would have happened if this operation had not been done?" Some of the patients recover, not because of, but in spite of, operation. I know how difficult it is to stay one's hand in the face of serious hemorrhage. The surgeon is apt to argue, "The patient is bleeding; I think that probably he will die; I must do something." The conclusion that "something" must be done because the patient is going to die is illogical. We must remember that it is not unlikely that the "something" will make the patient's life shorter still.

The physician, accustomed to see patients recover after severe hemorrhage from the lungs, or from cirrhosis of the liver, appreciates perhaps, more than the surgeon, the *vis medicatrix naturæ*. It is extraordinary how patients will recover after very severe hemorrhage, if only nature is allowed to do her work. In this connection, I must refer to the brilliant work of Dr. Crile in the

treatment of anemia resulting from hemorrhage, by means of direct transfusion. This seems to me to make the case against operation during hemorrhage stronger than it was before.

The rules I have formulated for my own guidance are as follows: In hemorrhage from an acute ulcer, that is, when the onset of bleeding is sudden and a history of previous gastric trouble is absent, first give a thorough trial to absolute rest in bed, ice applied to the abdomen, very hot water injections by the rectum, and the avoidance of food by the mouth for at least four or five days. If a second profuse hemorrhage occur operate, provided it is quite clear that the second hemorrhage has not been brought on by want of absolute rest or by too early administration of food. In hemorrhage from a chronic ulcer, that is, in cases with a definite history of pain after food, and vomiting, operate after one severe attack, or after several lighter attacks of hemorrhage, especially if the hemorrhage is increasing in quantity and recurring at decreasing intervals. As to the method of operating, I believe that gastro-jejunostomy, without any attempt to deal with the bleeding point, is the most satisfactory method of surgical treatment. I believe that in the majority of cases the hemorrhage comes, not from the ulcer, as is commonly taught, but from the inflamed gastric mucosa. Gastro-jejunostomy, by diminishing acidity, and doing away with hypersecretion allows the gastric mucosa to resume a normal condition and so stops the tendency to bleed.

CANCER OF THE STOMACH.

Although the stomach is more frequently affected with carcinoma than any other organ of the body, partial gastrectomy is one of the uncommon operations of surgery. This ought not to be the case and that it is so is a reproach to our profession. Granting that it is difficult in many cases to make a diagnosis of gastric carcinoma at an early stage of the disease, it is equally true that all means available are not made use of as they might be. Were the use of the stomach tube and the X-rays more general, a much larger proportion of cases would be recognized. It seems to me that the reason of the failure to recognize gastric carcinoma is, that many of the so-called symptoms of this disease enumerated in the text books are really late complications. When such are present the opportunity for successful surgical treatment is gone. In the early diagnosis of gastric carcinoma the important points are:

1. The impairment of the motor functions of the stomach. Gastric carcinoma begins at, or near, the pylorus in 65 per cent.

of the cases. It follows, therefore, that one of the earliest signs of cancer of the stomach is impairment of its motility.

2. The total chlorides of the gastric contents are diminished, the amount being usually less than 0.200.

3. The absence of free hydrochloric acid is the rule, its presence the rare exception.

4. Diminution of the protein hydrochloric acid is an early and very important sign of gastric carcinoma.

5. Examination by the X-rays may show irregularities at the pylorus, giving the appearance of finger-prints.

6. The persistent presence of blood in the feces, so small in amount that it cannot be recognized microscopically (occult blood), is very suggestive of gastric carcinoma.

Marked impairment of gastric motility or marked diminution of the protein hydrochloric acid in a patient over middle age, raises a suspicion of malignancy, and the shorter the history and the greater the degree of gastritis, as shown by analysis, the greater the probability of cancer. Let me illustrate this by the analysis of the gastric contents of two patients, neither of whom had a palpable tumor.

GASTRIC ANALYSIS.

Chronic Gastritis.

Total acidity	44.
Total Chlorides	0.206
Free HCl	0.000
Protein HCl	0.082
Mineral Chlorides	0.124

This analysis was obtained from the gastric contents of a man just over forty years of age, who had suffered from gastric symptoms for a year. The chemical findings are those of chronic gastritis, with very marked decrease of the protein hydrochloric acid; this may be due to inflammatory disease or to cancer. The comparatively long history, the good condition of the patient, and the absence of any degree of anemia, were against malignant disease. Cancer of such long standing should have resulted in a much lower total acidity, an even greater decrease in the protein hydrochloric acid, and probably more marked anemia.

At the operation a gumma of the liver was found which had become adherent to and implicated the pylorus.

GASTRIC ANALYSIS.

Gastric Carcinoma.

Total acidity	29.
Total Chlorides	0.183
Free HCl	0.000
Protein HCl	0.070
Mineral Chlorides	0.113

Here is an analysis from a man who had suffered for four months from symptoms referable to the stomach. You will observe that although the history is much shorter than in the case I have just mentioned, the total acidity is much lower and the protein hydrochloric acid much more diminished. This, coupled with the fact that the patient evidently had lost weight and was anemic, led to a diagnosis of cancer, which was confirmed by operation and the growth successfully removed.

Careful consideration of the points alluded to will enable us to come to a correct conclusion in many instances, but our only certain means of diagnosis lies in abdominal exploration.

The presence of these signs points to cancer, but our only certain means of diagnosis lies in abdominal exploration.

The practical question then is, under what circumstances is this justifiable? Are we to open the abdomen on suspicion, on probability or only on certainty of diagnosis? We must remember this, that if we wait for certainty, in most cases we have allowed the opportunity for radical treatment to pass.

Many cases of gastric carcinoma are treated medically for long periods, in the hope that they may prove innocent. Such hope rarely is justified. In most of the cases the condition found is such that even if it be inflammatory and not malignant, relief can be obtained only by surgical means.

How many cases of pyloric stenosis, both innocent and malignant, are treated for many weeks by gastric lavage, and yet the futility of such treatment as a curative measure is well known.

In an elderly person the probability that even a slight degree of gastric stasis is due to carcinoma is so great that its persistence, in spite of careful dieting, renders exploration justifiable. When once we are satisfied as to the probability of cancer, the risk of abdominal exploration is less than the risk of delay. We cannot, in all cases, diagnose cancer with certainty, but in the majority of cases we can say, from the diagnostic methods available, that surgical treatment is indicated. We must not be deterred by the fear

that we may be wrong. It is far less culpable to make an occasional mistake in the direction of suspecting cancer which does not exist, than, when cancer is present, to delay surgical treatment until a radical operation is impracticable. In suspected gastric cancer our policy should be to look and see rather than to "wait and see."

*WHAT CAN BE DONE FOR CANCER OF THE STOMACH?

It is not, perhaps, realized sufficiently that gastric carcinoma is markedly a local disease, dissemination is a late manifestation, and in the early stages the growth can be removed with favorable results, both immediate and remote; whereas no other form of treatment can hold out the slightest prospect of any lasting benefit. Gastric carcinoma in its early stages lends itself to wide removal even more favorable than cancer of the breast or rectum. It is a lamentable truth that many patients are allowed to die who might have been relieved, if not indeed cured, by a timely excision. I believe that in 20 per cent. of the fatal cases there is no dissemination at the time of death. In other words, twenty of those who die from carcinoma without operation, go to their graves with a growth which might have been completely removed. Such a state of things should not be possible.

* Occasionally the stomach is the seat of a diffuse fibroid infiltration aptly termed fibromatosis by Prof. Alexis Thompson, which may be very difficult to differentiate from cancer. In the museum of the Royal College of Surgeons there is a stomach which has been preserved and catalogued as a leather-bottle stomach, due to diffuse carcinoma.

THE VALUE OF THE LODGE

By A. C. E.

On the opposite side of the editorial desk, the click-click of the typewriter halted, one hand of the operator poised above whilst the other rested on the keys. The clear blue eyes and parted lips awaited an explanation.

For fully a minute Ethel Earle gazed at the crouching figure of her employer, his pale worried expression, the sprinkling gray at the templar base—the aspect of a man of fifty instead of forty: but there was no response to her suspended rattle. She was at that moment to him no more than the mere machine.

Her work had almost ceased automatically when Harry Rowland with a hunted look had burst through the door of the little newspaper office and had dropped into his swivel chair. She had known that creditors were pressing him hard. Being thoroughly familiar with his financial affairs, she now knew that the bank had just refused a further advance. In another moment she would realize that the bank had given him to the end of the month to cover his overdraft—two weeks to get together two thousand dollars.

A heaving sigh broke the silence and then the heart of the agreeable and sympathetic girl plunged to her employer's aid.

"Worry is dangerous in this hustling age, Mr. Rowland," was the philosophical opening remark by way of eliciting information upon the cause of this outburst. It had not been the first by any means she had experienced.

He raised his head slowly and planting his elbows on the desk rested his wracking brain in both hands:

"And it is a heartless one," he returned. "Men keep their hearts in the ice-box these days."

"Is it the bank?"

"Yes—and the creditors—but at present the bank in particular,"—and he told her of the ultimatum.

"Well, we have held the fort to the last extremity. Now we *must draw*," and she fetched the ledger to his side.

"No, 'Twould ruin our advertising patronage. What accounts are overdue?"

Ethel Earle turned the folios hurriedly, calling out the amounts which he pencilled on a pad—$3,000.

"That would tide us over," Ethel soliloquized rather than suggested.

"Miss Earle—Ethel,"—as his left hand descended and closed over the slim, white member resting on the book, and the hungry eyes sought the soft, sympathetic blue ones, "will it be 'us' forever? I need you now so badly and so do my two little girls at home. I haven't much to offer and—"

Both turned quickly at the sound of the door opening from the composing-room, to behold the foreman, Tom Maitland, bearing in one hand the mailing sheets for the week. Maitland stopped abruptly, over-looking the frowning brow of Mr. Rowland, but detecting a rosy blush on Ethel's cheek. He gave Ethel a swift, annoyed glance as he laid the sheets before his chief, withdrawing without a word.

"Those will save you, Mr. Rowland!" excitedly exclaimed Ethel, deftly returning his attention to business affairs.

"How?"

"You have been publishing this paper now for ten years."—Ethel quickened her tone to distract his thoughts from the previous conversation—"and there are over one thousand subscribers right in this small town who have been 'taking' the paper all these years and you have never rendered them a bill or collected a cent from any one of them. You say they are all 'complimentaries,' that they are friends, 'brothers' as you call them, all in some lodge or society you belong to, Masons, Oddfellows, Knights of Pythias, Woodmen, Royal Arcanians—surely, now is the time, when you are in trouble and in need, for them to prove their fraternalism!"

He shook his head as he replied: "I would be simply ostracised."

"Then you have not much faith in fraternity and the boasted 'protection to the home' of these organizations," flicked the stenographer as she returned to her seat.

"Yes, I have. But I'll tell you what I'm going to do. I'll run down to New York for ten days to see if I can write up some pay-in-advance contracts. Perhaps I can again turn the tide in that way. You can run the office and Maitland can get out the paper, and you can send out those circulars through the county for new subscribers. That plated-spoon-premium offer will get the farmers' wives," and he arose and reached across the desk: "Good-by! I'll ask for your answer when I return."

Ethel remained for a half-hour examining the mailing lists and thought if he wanted her for his wife, he would not object to his prospective bride making the paper a better paying proposition. She had just resolved to put fraternalism to the proof when the composing-room door opened cautiously and Tom Maitland stuck in his head.

"Where's the boss?"

"I'm the boss!" replied Ethel without raising her head.

Tom advanced two steps.

"Is he gone for the day?"

"He's gone for ten days," still attentively studying the mailing sheets, and not knowing what Tom had seen, probably heard, and felt.

Thus re-assured, Tom came quickly over to her side.

"I don't like this business," he began.

"The newspaper business is as respectable as any other," Ethel rejoined from the sheets.

"You know what I mean—he was making love to you."

Ethel broke into a merry laugh, and looked up at the dark eyes and set brow of her curly-headed lover as she replied: "Look here, Tom! Mr. Rowland is in great trouble financially and I hadn't the heart to stop him then. I feel sorry for him. You know his wife died two years ago, and he has no one to confide his business cares to but me, and he has rushed off to New York to see if he can get some cash advertising to meet an overdraft of a couple of thousand. If he can raise that amount now he can get a new line of credit to appease his other creditors. Now, I have a plan to help him, and you must help, too. If the paper goes smash, you lose your job, and we don't get married just yet—see!"

"I call you," as he took a seat on the desk.

"You are an Oddfellow, are you not? Give me the grip!"

He did, but Ethel always declared it was more like a bear's hug.

When she had adjusted her hair, she resumed:

"Here are over one thousand subscribers," pointing to the mailing sheets, "right here in this town, and Mr. Rowland has never collected a single dollar from any one of them in ten years; and I am going to ask them all in H. B. and C., or Y. R. C., or something like that—write personal letters to every one of them to stand by their 'brother' in this emergency. Will they do it?"

"Ethel, if you put it to them like that, every mother's son of them will pay up at once, and it will be additional income hereafter."

"Well, then, hurry away to your work, Tom! This is my busy day."

For one whole week, Ethel 'typewrited' and 'typewroted,' as Tom expressed it when folding the letters at night for her, placing them in their envelopes, and tongueing them for the stamps. The six days had been busy days for Ethel and so were the next three. The postman complained of the letters he had to carry to the little newspaper office: and Ethel was just as busy signing receipts in the office as she was with writing "received payment with thanks" on those she re-mailed. The brotherhood had responded nobly.

On the morning of the tenth day as Ethel was at the desk preparing to take up the silver-spoon-premium offer, Mr. Rowland came back to the office a more depressed man than ever. He explained to her, he had been moderately successful in New York, but in a weak moment he had cashed some of the checks one day and gone to the races. Of course he won. It was so easy to persuade himself he could raise the balance of the required amount in this way that he went again. Then he commenced to lose, cashed the balance of the checks, and lost steadily until he was stripped of all the pre-paid advertising money. In one respect, however, she considered he was a brave man. He had returned to face an assignment.

When Ethel had heard all this, she suffered chagrin, especially after having worked so faithfully in her employer's interest, but while she sympathized with him in his folly, she felt overjoyed at her own success. The experience, even at his age, might prove a lesson to him.

"There, Mr. Rowland," she said as she placed the pass-book in his hand, "that ought to cheer you up. Hereafter, you should put more trust in your brotherhood—and they were all glad and happy to pay."

"And you?" he whispered.

"I—I'm going to marry your 'brother,' Tom Maitland."

THE MANAGEMENT OF DISTURBED MENTAL CASES PRIOR TO COMMITMENT

(Therapeutic Gazette.)

By George T. Faris, M.D.
Assistant Physician, Pennsylvania Hospital for the Insane.

Advancing civilization has done away with whipping, torturing, chaining in cellars, jails, or dungeons, and occasionally burning, in the treatment of persons afflicted with mental diseases. Progressive scientific knowledge has produced a gradual process of evolution. There are now well-equipped hospitals, well-lighted and well-ventilated, cheerful rooms, corridors and sun-parlors, good food, and expert medical care and competent, intelligent, trained nursing.

A medical man on being called to a patient suffering from some form of mental disease, or insanity, must first consider whether that patient should be admitted to a hospital. This will depend on the character of the mental disease encountered. If the patient is quiet, co-operative, the actions not dominated by delusions and hallucinations, it is often possible and practical to care for the patient at home. On the other hand, if delusions and hallucinations are in control, there is no alternative, especially if exhaustion is impending.

For the management of the patient in the intervening time, there are three important questions confronting the physician: 1. The administration of narcotics. 2. The use of hydrotherapy. 3. The frequency and kind of food the patient should receive.

The patient should be practically isolated near a bathroom, under constant most vigilant supervision, preferably by experienced nurses. Sharp instruments should be removed from the room, and everything which might be used to harm the patient or others. Windows should be so fixed that they could not be opened more than six or eight inches at the top or bottom.

Rest in bed, possibly through sedatives or narcotics. Hyoscine hydrobromate 1-100 to 1-50 of a grain hypodermically is one of the best. Where there is intense motor excitement 1-6 to 1-4 of a grain of morphia sulphate may be added. By this means quiet is secured until a hot pack can be made ready. The physician

should exercise his judgment in spite of family protestations for more quietness. The secretions must not be suppressed. Do not abuse the bromides, trional, veronal, chloral, etc.

Hydrotherapy has its limitations in the average home, but the physician can always get sheets and blankets. The hot wet pack has a greater sedative action than the cold pack, but a cold one may be used, provided there are no contra-indications. With a dry blanket spread on the mattress, and the patient placed thereon, a sheet wrung out of hot water so it does not drip is wrapped around one leg to the pelvis; a second for the other leg; a third around the trunk. Then a snug blanket, a second and a third if necessary. This method provides quick and easy access to the rectum in case an enema is deemed necessary. An ice-cap or Turkish towel dipped in ice water should be applied to the head, and frequently changed. Cold water may be given freely to drink. The pulse and temperature should be watched. The patient may remain in the pack from one to six hours. On removal wrap in warm, dry blankets. The pack may be repeated as often as necessary.

Most of these cases take nourishment fairly well. Milk, raw eggs, animal broths, and plenty of water, besides the regular meals, are strongly recommended. The mouth and teeth should be kept clean; laxatives and an occasional enema; stimulants and tonics if necessary. Never give medicines in food. Before artificial feeding, if the patient refuses food, give ample time. Hunger may induce eating. Artificial feeding should always be given by the doctor, best by nasal tube. The patient may be either seated or reclining. Sufficient help should be at hand should the patient struggle. A convenient time to feed a patient is when in the pack. Offer food from time to time, as they frequently learn to depend upon the tube. Two forced feedings a day are, as a rule, adequate. Enforced feeding, laxatives and cathartics may be added, if required.

PUERPERAL PHLEBITIS: ITS PROPHYLAXIS AND MEDICAL TREATMENT

(Medical Press and Circular.)

By Professor G. Keim, M.D., Paris, France.

Cruveilhier insisted on the existence of an endovenous lesion, since associated with a particular micro-organism. Bouchut explained the supervention of phlebitis in the cachectic as a result of blood coagulation. The coagulation is stated to be primary, mechanical by slowing of the circulation—chemical, by the conditions governing coagulation of the blood within the vessels. This second cause has hitherto not been viewed with favor in France. It appears to explain the occurrence of phlebitis independently of any primary infection. Recent researches seem to support the view that chemical, toxic and mechanical causes play a more important part than has been thought in the pathogenesis of phlebitis.

The liver in pregnancy undergoes more or less fatty degeneration, and auto-intoxication may culminate in eclampsia. The liver is more affected the less normal the pregnancy, and this is also the case in intestinal intoxication; and the functions of the liver, especially the anti-coagulating function, may be more or less suspended. During pregnancy and the puerperium the circulation is slowed and the composition of the blood is altered.

How does the blood plasma promote the production of phlebitis? There is spontaneous thrombosis in the uterine veins after delivery, setting in before delivery for preventing hemorrhage. This is true, aseptic, physiological thrombo-phlebitis. If this is propagated into the deeper veins there is pathological uterine thrombo-phlebitis, which may give rise to phlegmasia in the lower limbs.

No sign reveals the existence of localized uterine phlebitis, it often escapes observation. It may be suspected from rapid pulse out of proportion to the temperature, or pain on one side of the womb. When it becomes infected, there is suppurating thrombo-phlebitis, with local and constitutional symptoms of suppuration, or it may cause embolism through sudden movement, early rising, usually fatal pulmonary embolism.

This explains the first series of events, explains phlebitis during the puerperium, apart from infection.

The writer has been struck by the coincidence of phlebitis and signs of intestinal toxemia. The intestinal toxins injure the

liver—and there is the part the liver plays in promoting coagulation. Intestinal fermentation is common in eclampsia and in thrombosis and embolism in gravidic intoxication.

Constipation in the pregnant woman favors the over-production of toxins; and thromboses are met with in other cases of intestinal intoxication other than in pregnancy. The remark applies to the phlegmasia of appendicular origin.

Infective phlebitis makes its appearance between the tenth and fifteenth day, the toxic and mechanical form of phlebitis under consideration may supervene at any part of the puerperal period. It is met with on the first or second day as well as up to the twentieth or twenty-fifth. It may manifest itself by local signs or suddenly by embolism.

The variable onset may be thus explained. It often coincides with the probable date of the missing menstrual period. The organism is no longer immunized by pregnancy against menstrual intoxication; the latter returning may intensify the toxic symptoms; not sure; but the coincidence is worthy of note.

What ought the accoucheur to do in prophylaxis? His prophylaxis is quite different to practising antisepsis and maintaining asepsis.

He must treat the constipation and the enteritis during gestation, all the more so if there have been cases of phlebitis in the family, or unduly rapid pulse, lateral uterine pain. If there be a history of liver disease or gall-stones, colic, or former eclampsia, this should be all the more imperative.

Gentle laxatives, enemata; hamamelis and strychnine for its tonic action on non-striated muscle fibres of vessels, uterus and intestines; calomel; urotropine. Locally overcome uterine inertia and hemorrhages, emptying the uterus of blood clots, membranes and blood serum, all which make for thrombosis. Avoid saline or sublimate solutions in the uterine cavity, since they exert a coagulating action.

The blood can be rendered incoagulable by an enema of an emulsion of 100 grammes of fresh calf's liver in 250 grammes of water, to which 10 grammes of pure peptone is added. The object of this is to provoke an anti-coagulation secretion, and it seems to yield a good result in preventing thrombosis in cases where it is apprehended and in improving the symptoms when present. The writer's point is this: Side by side with the classical microbial infective thrombosis and phlebitis there is a form of thrombosis and phlegmasia of toxic and mechanical origin. Uterine antisepsis may be the direct cause of the coagulation in some instances.

THERAPEUTIC NOTES

Tuberculous Laryngitis. — Hinman (*Albany Medical Annals*) employs the following ointment: The base is equal parts of sesame oil and petrolatum with a dye strength of 10 per cent. of scarlet red. This is applied twice daily to the larynx. There is prompt relief of pain, the applications are not distressing and not irritating.

Atropine in Stomach Diseases. — Pletnew (*Ther. Monat.*) wonders at the little use of atropine in treating stomach conditions resulting from abnormal excitability and overaction of the vagi. He states it can be relied on when secretion or motor functioning or both are deranged, or if there are anatomic lesions in the stomach wall. Atropine checks secretion, reduces acidity, corrects pylorospasm and hour-glass spasm. It relieves the pains, the spastic effects being due to the excessive secretion. Its action is symptomatic.

Gastric and Intestinal Hemorrhages.—Nottebaum (*Deut. Med. Wochen.*) controls persistent diarrheas and intestinal hemorrhages with tincture of iodine. For acute cases, tincture of iodine, one c.c., sodii iodidi 0.1, aquae menthol piperitae, syrupi simplisis, a.a. 20.0, aquam ad. 200.0. For chronic cases, tincture iodi, 2.0, tincture amara, 13.0; ten to fifteen drops before meals.

Sore Nipples. — Neubauer (*Deut. Med. Wochen.*) has found that for a rapid cure of sore nipples a ten per cent. salve of eugnform (a condensation product of guaiacol and formaldehyde) is the most satisfactory.

Chronic Obstipation. — H. *Ehrlich* (*Deut. Med. Wochen.*) says that peristaltin (a glucoside of cascara sagrada) is an exceptionally good mild cathartic. It is also effective in overcoming postoperative intestinal paresis.

Post-partum Hemorrhage. — Gräf (*Mün Med. Wochen.*) recalls the procedure of compression of the abdominal aorta in atony of the uterus and resulting severe post-partum hemorrhage. It should be done from ten to fifteen minutes, when the hemorrhage stops spontaneously.

Chronic Nephritis. — R. Hills (*N.Y.M.J.*) recommends for the anemia of chronic nephritis, fresh air in abundance and good food, and that various preparations of iron, quinine and strychnine are of much service as tonics. Altogether, after reviewing the many modes of treatment for this condition, there is much vagueness as regards the proper treatment of chronic nephritis.

Venereal Disease. — R. Connell (*B.M.J.*) writes on the treatment and reports cases of primary syphilis, secondary syphilitic ulcerations, gummata, soft sores, septic buboes after operation, and gonorrheal rheumatism, by ionic medication. In those cases of syphilis with no evidence of mixed infection, the best results were obtained. At the Royal Naval Hospital, Plymouth, antisyphilitic treatment is given as soon as a diagnosis is made. Two grains of grey powder is given thrice daily; and to a majority of cases, three injections of neo-salvarsan.

Fractures of Elbow and Knee-joint.— Hughes (*B.M.J.*) says that treatment by full flexion (Jones' method) applies to all fractures in the neighborhood of the elbow joint, except of the olecranon, and most cases of the head of the radius. Open operation is preferable in the two latter, wiring of the former, and often excision of the latter. In fractures of the knee-joint involving separation of the lower epiphysis of the femur and fracture of the shaft in the neighborhood of the condyle root involving the joint, the displacement is reduced under an anesthetic. Then the knee is put in full flexion and held so for ten days or two weeks. Then it is brought down to full extension and put up on a Liston's long splint with extension below the knee.

Pulmonary Tuberculosis. — Boudreau (*Jour de Med. de Bordeaux*), considers iodine the direct, specific and heroic procedure for tuberculosis. He declares it transforms the system as to bring about complete immunization. For the last ten years, Boudreau has given this treatment systematically, pushing it to the limit of tolerance. It is taken by the patient in his beverages. He prefers the tincture, commencing with small doses and carefully tests the tolerance. From 20, 60 or 100 drops a day, the patients pushed the treatment themselves to 200 or 300 drops a day, and one took 400. Signs of iodism were extremely rare. He has also found it of advantage in renal tuberculosis.

Lavage of the Peritoneum. — Jeanneret (*Revue Med. de la Suisse Romande*), states that the recovery of a child of seven years can be credited to the use of ether in a late stage of acute peritonitis from appendicitis. The method, according to numerous observers, marks a great improvement in the prognosis of infection of the peritoneum.

Exophthalmic Goitre. — Klose (*Berliner Klin. Wochen.*) writes on the increasing safety and benefit from operative treatment in this disease since resecting the thymus along with the thyroid has been adopted, or removing the entire thymus. It is now considered that the danger after thyroidectomy is due to acute intoxication from the thymus after the thyroid is removed. It is interesting to note that at Rehn's clinic there were eight deaths from this cause alone in 130 operative cases up to 1911. Since that time there have been 200 operations where the thymus has been resected along with the thyroid, with no deaths. Local anesthesia is always used, which with the resection of the thymus has placed the treatment of exophthalmic goitre on a new plane.

Boils. — (*J.A.M.A.*) a warm alcohol poultice, consisting of one part of alcohol and four parts of warm water, applied by means of a mass of gauze covered with oiled silk and bound firmly to the part, is very satisfactory treatment. This dressing need be changed twice a day.

Cancer.— Lunckenbein (*Mün. Med. Wochen.*) reports favorable results in fifteen cases of inoperable cancer. He used an intravenous injection of an autolysate from the patient's own tumor. These autolysates he puts up in fused tubes. They keep three or four weeks on ice. The relief of pain is prompt and effectual.

Abortion.— Trangott (*Zeits. für Geburt. and Gynäk.*) leaves the emptying of the uterus to nature where there are streptococci in the vagina or blood. The infection is combatted by rest in bed and ice, leaving the uterus entirely alone. The fever abates, the cocci do not grow more virulent and they gradually disappear. Then, when this is realized, he curettes the uterus, finding that at this stage it is harmless. Out of forty cases managed in this way, the patients recovered without complications. In only nine of the forty cases was the uterine cavity found empty upon curettement. There was no morbidity or mortality in the entire series. This is from the women's department of the public hospital at Frankfurt.

Reviews

Preventive Medicine and Hygiene. By Milton J. Rosenau, Professor of Preventive Medicine and Hygiene, Harvard; formerly Director of the Hygienic Laboratory, U. S. Public Health Service. New York and London: D. Appleton and Company.

There is a pleasure in reading and writing about this new applicant for professional favor within the ranks of medicine, sanitary science and public health. No book within recent years has appealed with more knowledge of its comprehensive scope in the domain of public health work. It has many new features not to be found in the ordinary books on preventive medicine and hygiene. For instance there is a chapter on the prevention of mental diseases, a subject as yet almost in its embryological state. There are articles on venereal prophylaxis and sex hygiene, workroom disease, standardization of antitoxic sera, phagocytosis, opsonins, lysins, cytotoxins, fixation and deviation of complement, precipitins, agglutinins, anaphylaxis, heredity and eugenics, industrial poisoning, occupational diseases, medical inspection of school children, humidity and temperature, water filtration (slow sand and mechanical), in fact more things in a work of this character than possibly ever before attempted.

The illustrations and charts come out well and they are numerous, new, and add decidedly to the value of the entire work.

The chapter on sewage and garbage comes from the distinguished sanitary engineer, George C. Whipple; that upon vital statistics, from Cressy L. Wilbur, chief statistician of the U.S. Bureau of the Census; that upon prevention of mental diseases, from Thos. W. Salmon.

It was to be expected that a man with the varied experience of Dr. Rosenau would produce a book which would stand in the front rank if, indeed, it does not lead among similar works of this class.

For a comprehensive work on all matters in which officers of public health and medical men are interested, this book can certainly be heartily recommended.

The style is easy, the subject matter well arranged, perspicuity being a dominant characteristic of every article.

In these days, no medical man can afford to be without this first-class book.

Dominion Medical Monthly

And Ontario Medical Journal

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COMMENT FROM MONTH TO MONTH

Radium, more than any other therapeutic agent, has lately been receiving a great measure of attention from the medical press, lay magazines, scientific journals and periodicals, as well as the newspapers.

There have been articles of value, and others of doubtful value, even in some of the medical press. It is a wonderful product and the most precious substance in the world. It is because of its reported curative properties, especially in superficial cancers, that it is being given such special prominence.

It is obtained from three minerals, carnotite, pitchblende and autunite, its most important source being carnotite ore. The greatest known field of this ore is now said to be in the Paradox Valley of Colorado and Utah.

Until recently the manufacture of radium from carnotite ore was almost wholly confined to France and Germany. To these places American ores have in the past been shipped in large quantities; but the enterprise of American citizenship will probably soon see that the product will be produced in America.

The medical men who are using radium as a therapeutic agent in Canada, as well as scientists all over the civilized world, may be set down as being as honest and earnest in this department of medical science as in any other department.

A medical writer to this journal says: "That radium has accomplished much that has been expected of it will be admitted by any fair-minded man. Has the X-rays, quinine or mercury accomplished all that was expected of them? Yet who will deny their utility in properly selected cases."

He points to the men engaged in this line of work: "Professors Bumm and His, of Berlin; Professor Kronig, of Freiburg; Professor Doderlein, Munich; Professor Richl, Vienna; Professor Bayet, Brussels; Drs. Wickham (late), Degrais, Barcat, Dominici, Pasteau and Foveau de Courmelles, Paris; Finch, of the London Radium Institute; Knox, of the London Cancer Hospital; Sir Alfred Pearce-Gould and Sir F. Treves, London; Dr. Dawson Turner, Edinburgh; Dr. Abbe, New York, as well as other acknowledged authorities."

Truly, as the writer states, times have changed in medicine. The ubiquitous reporter is everywhere. The public demand information—but sometimes to their sorrow: Instance the Freidmann serum. If the medical profession is to be held responsible for newspaper medicine, then that profession should educate the public to require the information to be authentic. From what source will this information be obtained if not from the specialist? The corrective is the medical man attached to the prominent daily press to filter or sift out the exact and quarantine the inexact.

Editorial Notes

THREAD-TEST FOR GASTRIC ACIDITY

Schwarz uses a solid gelatine capsule containing a heavy powder giving a neutral reaction. The capsule is pierced and a thread drawn through it which has been soaked for half an hour in a 0.25 per cent. aqueous solution of congo red. The thread is 120 cm. long and after passing through the capsule, is tied over it and the capsule is then swallowed half an hour after a test breakfast. The free end of the thread is held in the hand. After fifteen minutes the thread is drawn out, the capsule having dissolved in the stomach in the meanwhile. The end of the thread which has been in the stomach is now dark blue or violet proportional to the amount of hydrochloric acid in the stomach content: if the thread is still red, this shows anacidity or that the capsule has stuck somewhere on its way. By this simple means the condition in regard to acidity in the stomach can be determined without inconveniencing the patient.—*J.A.M.A.*

CANADIAN ARMY MEDICAL SERVICES

Colonel the Hon. Sam Hughes, Minister of Militia, at the seventh annual banquet of the Association of the Officers of the Medical Services of Canada on February 24th at Ottawa, attended by members of the Army Medical Corps from all over the Dominion, held in the Chateau Laurier to-night, frankly declared that he had no apology to make for the money he is spending on the Canadian militia. He said that he is spending less money on his department than any other Minister of Militia has done since Confederation, and avowed that no money spent by the Government reaches the pockets of the people so quickly again as that spent by the Militia Department.

In commenting on war, he maintained that he is inclined to think sometimes that more wars are caused by clergymen than by any other class of men. Wars, he said, are seldom caused by soldiers, yet soldiers are always called upon to settle them. Referring to the proposal to celebrate the one hundred years of peace between Great Britain and the United States, Col. Hughes

claimed that since the beginning of the twentieth century there had been more bloodshed than in any other fourteen consecutive years in comparatively modern times.

His Royal Highness the Duke of Connaught, who was the chief guest, said, in replying to a toast drunk to his honor, that he was a great believer in discipline, and held that everyone is better for a little of it.

Lieut.-Colonel Fotheringham of Toronto, presided. Major D. B. Benton of Sarnia, Commander of the Fourteenth Field Ambulance, was presented by his Royal Highness with the silver cup given by Colonel G. S. Ryerson, Toronto, for the best field ambulance work done during 1913.

Officers Elected.

The following officers for the ensuing year were elected: President, Lieut.-Col. R. T. Macdonald, Sutton, Que.; First Vice-President, Major G. M. Campbell, Halifax; Second Vice-President, Lieut.-Col. H. R. Casgrain, Windsor; Third Vice-President, Lieut.-Col. Murray McLaren, St. John, N.B.; Secretary, Major T. H. Leggett, Ottawa; Assistant Secretary, Captain Neill McLeod, Ottawa; Treasurer, Major F. McKelvey Bell, Ottawa; Executive Committee, Lieut.-Col. Shillington, Ottawa; Major Lorne Gardner, Ottawa; Major David Donald, Victoria, B.C.; Major W. Watt, Winnipeg; Major Wallace Scott, Toronto, and Major Wyld, Montreal.

Col. G. C. Jones, Director-General of the military forces in Canada, announced that the Minister of Militia had agreed to increase the annual Government grant to the association from $500 to $1,000. Reports from officers of the various committees showed that the association is flourishing.

News Items

Dr. A. S. Gorrell, Regina, has been visiting in Toronto.

The Hon. Dr. Lanctot, Montreal, is dead, aged 68 years.

Dr. R. E. Webster, Ottawa, has been visiting in New York.

Dr. Francis J. Shepherd, Montreal, has gone on a trip to Panama.

Cobourg, Ontario, has opened a new hospital at a cost of $50,000.

Dr. Geddes has been appointed a Governor's Fellow of McGill University.

Dr. Ernest Hall, Vancouver, B.C., has returned from a trip round the world.

The Western Medical News is now the official organ of the Saskatchewan Medical Association.

Sir William Macdonald has been elected Chancellor of McGill University, Montreal, in succession to the late Lord Strathcona.

The Vancouver General Hospital proposes to build a maternity hospital, an infectious diseases building and new administration quarters at a cost of $700,000.

St. Paul's and Alexandra Contagious Diseases Hospitals, Montreal, admitted during the past year 2,265 patients. There were 2,001 discharges and 204 deaths.

Many villages surrounding Montreal are said to have several cases of typhoid fever. The secretary of the Quebec Board of Health states that the number is seventy-seven.

Dr. Arthur Wilson, secretary of the Saskatchewan Medical Association, and sometime assistant to the Commissioner of Health, has been appointed medical officer of health for Saskatoon.

Lachine General Hospital has received a donation of $10,000 from the Dominion Bridge Company. During 1913 118 private patients and 35 public patients were treated in this hospital. The revenue was $10,000 and the expenditure $11,122.

In Montreal the Friedmann serum is announced to have produced no benefit in the fifty-six tuberculosis patients treated by Dr. Friedmann in the Royal Edward Institute. The few deaths which have occurred were probably neither hastened nor delayed.

Dr. Abbe, of New York, addressed the Academy of Medicine, Toronto, at its regular monthly meeting the evening of March 3rd.

The subject was radium. Dr. Abbe, whilst in Toronto, was the guest of Dr. W. H. B. Aikins, who gave a luncheon in his honor at the York Club.

Owing to the increase of liquor and tobacco consumption in Canada, the Federal Parliament will wrestle with the increase of liquor manufacturing. One prominent member will also introduce legislation to prohibit the manufacture, sale and importation of cigarettes in Canada.

Dr. T. J. Moher, superintendent of the Provincial Hospital for the Insane at Cobourg, Ontario, died February 24th. He was fifty-two years of age and had gone through a long illness. The late Dr. Moher formerly practised at Peterborough and was sometime superintendent of the Hospital for the Insane at Brockville, Ontario.

Twenty nurses, known as Public Health Nurses, are now engaged in tuberculosis work by the Toronto Health Department. They visit tuberculosis clinics at the Toronto General, St. Michael's and the Hospital for Sick Children and the University Settlement, as well as the baby consultations established by seven social agencies throughout the city.

Dr. George Harrison, Clifford, Ont., died on the evening of the 7th of March, in his fifty-sixth year. He was a son of Dr. Thos. Harrison, of Selkirk, Haldimand County, Ontario, who has been a well-known figure at medical society meetings for many years. The late Dr. Harrison was graduated in 1890, and spent a year in the Toronto General Hospital. He practised in Clifford eighteen years.

The General Hospital, Stratford, Ontario, faces a deficit of $879.69 for the past hospital year. The per diem cost per patient is reported at 41.58, while the bulk of the 627 patients treated paid $6.00 or less per week, forty-four being free patients. The hospital has a floating debt of $5,309.61. Increased city and county grants will be sought as well as donations from citizens to liquidate this debt.

Colonel Sir William Boog Leishman addressed members of the medical profession while in Canada recently in Montreal, Ottawa and Toronto. On March 2nd he lectured before the Academy of Medicine, Toronto, in special session on "Typhoid Inoculation." He was accompanied from Ottawa by Colonel Carleton Jones, Director-General of the Army Medical Services. Dr. H. J. Hamilton, president of the Academy of Medicine, gave a dinner at the York Club, in Sir William's honor.

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Original Articles

THE THERAPEUTICS OF RADIUM*

By Dr. Robert Abbe, New York.

On Tuesday, March 3rd, 1914, Dr. Robert Abbe of New York discussed at the Toronto Academy of Medicine the therapeutics of radium. He showed many plaster casts and lantern slides of cases he had treated.

Dr. Abbe said that a certain lecturer at Yale had told him some ten years ago that he had got all there was out of the physics of radium and said to Dr. Abbe, "Now it is up to you to learn something new." But this professor is still learning and writing books on radium.

Exhibition of Plaster Casts.

Dr. Abbe passed round some plaster casts, a few picked out from the thousands he had made. These were records of the appearance of cases before and after treatment by radium.

The first was that of a simple case of ordinary rodent ulcer in which the wing of the nose was destroyed. Twenty minutes of radium treatment cured the condition, as was well shown by the second cast that was exhibited, and this patient has remained well.

The second case showed a similar condition but more advanced. Here the wing of the nose was eaten away entirely, also part of the lip. A little radium tube was put in three or four times and in five weeks the ulcer was perfectly cured. The casts of this case showed the condition of the patient nine years ago, immediately before treatment, and also the present con-

* Address delivered at the Academy of Medicine Reported by Dr. J. F. Goodchild.

dition. In the second cast there was no return of the disease. The patient has remained perfectly cured for nine years. This is an illustration of the fact that radium does what surgery has never been able to do. Surgery sometimes cures the patient but never cures the disease, whereas radium puts an end to the disease itself.

The third pair of casts exhibited another case of the same type, an epithelioma of the corner of the eye and including both eyelids. After radium treatment and some weeks in the hospital while treatment was applied this patient became perfectly well.

The fourth cast was one of a case of cancer behind the ear. This growth had been burned out, frozen out and cut out, but always came back. In June some seven or eight years ago, when the patient came to consult Dr. Abbe, eroded tissue extended down the side of the neck. Two or three radium tubes were applied for an hour at one time on four different occasions, and in October the patient was perfectly well. A cast taken six years afterwards showed the condition to be still perfectly healed.

Another cast was that of an eyelid case. The lower lid was the site of a tumor involving some three-fourths of the lid. It was sent to Dr. Abbe for a plastic operation. This round-celled sarcoma was cured by four one-hour applications of radium. This case illustrated a result so good that it was not possible to tell from the plaster casts which one was taken before treatment and which after treatment. The condition was perfectly cured. A photograph taken of this case lately made it plain that it is impossible to tell upon which eyelid the tumor grew. Here there was a mass of cells which had engulfed practically all the tissue of this eyelid. Radium was laid upon it and there was a reassemblage of the normal cells of the lid. The mucous membrane again took on its normal appearance, the edge of the lid its normal shape, and the whole lid became restored. Radium had reassembled the cells which, though not destroyed by disease, were engulfed. This case was treated just in time—that is, before necrosis had set in. This case, called a round-celled sarcoma, was probably a basal-celled type of epithelioma. All sorts of tumors which are of a basal-celled type are cured by radium if they have not gone too far. The simplest type of tumor is the ordinary wart, the non-malignant papilloma. Hundreds of these have been cured completely by fifteen to thirty-minute applications of 10 milligrams of radium.

Another interesting type of tumor which had been treated with success was that of epithelioma of the nipple, commencing

cancer of the breast. He reported many of these cases which he had treated with satisfactory results. Every one of these cases had been cured by simply placing a piece of radium over the diseased area. Photographs of warts from various parts of the body, mouth, tongue, extreme cases, were shown, all of which had been completely and perfectly cured by the use of radium.

The lantern slides of the cases before and after treatment were most instructive. One, a large parotid tumor which would have been almost impossible of treatment by surgical means, was completely cured by the use of radium.

Cancer of Tongue and Gums.

He next showed some cases of cancer of the tongue and gums which were cured. One of these that was cured died recently of cancer in some other part of the body. In treating one case of cancer of the tongue, the part became so painful he had to use surgical means, removing part of the tongue and then continuing the radium treatment until the condition was cured.

Myeloid Sarcoma.

Dr. Abbe reported radium a specific for myeloid sarcoma. He showed photographs of a boy where a tumor of this variety was present in the jaw. The tumor occupied almost the entire half of the inferior maxillary bone, and in this mass of growth there were three loose teeth. Radium laid about this mass caused it to shrink, and after a few applications the growth began to get gritty and finally became harder and harder. The size became reduced to normal, with the bone firm and hard, and the teeth perfectly firm and solid in their places.

Some specimens of carnotite containing two or three per cent. radium were then passed round. He said that the original mineral in which this was found was pitchblende. This was American ore. He also showed some Austrian pitchblende, and remarked that the Austrian pitchblende is much richer in radium than the American, but that all contain radium in workable quantity.

Radium Apparatus.

Dr. Abbe then exhibited different forms of radium used in the treatment of disease. The first specimen handed round for examination was a little glass tube some three inches in length and containing 60 milligrams of radium in one end of the tube. He said this form is used in the treatment of such con-

ditions as diseased eyelids, for inserting in various body cavities, also for inserting in the tumors themselves after opening them surgically. When passing it into these tumors he usually wraps a little cotton about the tube. He said the most perfect way apart from the tubes is the little vulcanite style with ten milligrams of radium in it. This is pure radium bromide in a little convenient holder. If this is laid on the hand for ten minutes it will cause a burn, or on a wart it will disappear. Another form exhibited was the plaque of square metal having a burnished surface and containing 25 milligrams of radium. Dr. Abbe explained that this little plaque was emitting from it multiple rays, and later during the course of the lecture he showed these on the screen. All the rays are given off from this plaque excepting alpha.

Exhibiting an ordinary barium platino-cyanide screen and holding up a plaque of radium the screen became brilliantly illuminated. The rays had gone in a straight line from this small piece of radium, and, striking the screen, it shone brightly. In radium we have something absolutely new in physics. There is something in it like life itself. From it rays go straight into infinite space with almost the speed of light. They do not deviate from their course till influenced by some magnetic influence. If the rays pass through some magnetic field they are separated instantly. The alpha rays, being positive to electricity, go to the right, and the beta rays, being negative to electricity, go in another direction. The gamma rays are not affected by the magnet and they will still go straight on into space, uninfluenced in their course by electrical force. These gamma rays are like light itself, rapid, vibratory rays going straight into infinite space. Holding the plaque in his hand, Dr. Abbe said, "The rays from this little plaque this instant are now in the universe off to the nearest stars and they are continuing to go. They are discharged instantly. This peculiar quality of radium makes it a very penetrating and very active agent. If you allow these rays to strike the cells of tumors or the cells of the skin or even vegetable cells you will get the same demonstration of its representative action on cell life."

The Action of Radium on Seeds.

A very interesting experiment which Dr. Abbe had carried out was one showing the action of radium on seeds. Some seeds were put in a box and a piece of radium placed on top of the box. Every few hours some of these seeds were taken

out and planted in rows in turn as they came from the box. Some of the same seeds that had not been influenced by radium at all were planted beside those that had been so influenced. This experiment showed that the longer the seeds were exposed to radium the weaker was their growth. Those that were left long enough under its influence were killed, and did not grow at all. The action is the same on animal and vegetable cells. It is supposed that the gamma rays are the efficient ones that act upon the cells. The dynamic force of radium we have not yet measured very well. In regard to its use, however, the subject of cancer has become a prevailing one for serious popular contemplation. This is unfortunate, because this will hide the real use of radium. Cancer will not be settled for a generation. If we get to the fringe of it we will do a great deal. The very beginning of cancer has hardly been touched upon as yet.

In the experiment with the seeds he showed different rows stunted by different exposures. All the plants were there, but stunted in growth in direct relation to the time of their seed exposure to radium influence. Bulbs also were shown retarded in growth in a similar way. These bulbs went through life each the same as the other, only stunted and delayed in growth. The action on the cells of tumors is the same. The cells of these are arrested in development, and if the exposure to radium is long enough they necrose.

A very remarkable case was shown, one of sarcoma of the scalp. After using a large amount of radium in treatment for two days the tumor was half gone and in twenty days had entirely disappeared. This patient remained in Johns Hopkins Hospital for two months and then went home cured. Speaking of the physics of radium, Dr. Abbe alluded to the experiment already mentioned, and said that the alpha rays have a short excursion, the beta rays an excursion of about five inches, whereas the gamma rays go straight into infinite space. An experiment was made to prove that there are these different rays. A radium plaque was used with lead screens in front of it to prevent the rays getting beyond a certain distance; beyond was a barium platinocyanide screen. The rays from the plaque were seen going to the upper part of the screen, but below all was in darkness by reason of the piece of lead interposed. An electric magnet was put in front and all the alpha rays were changed in direction and the beta rays were changed in course so completely that they illuminated behind the point from which they started. They were so deflected they came

round and beneath the plaque. Trying the effect of the separate rays, it was found the beta rays arrest growth and the gamma rays seem to have no effect.

When we once understand exactly the effect of each of these different rays, we can apply the different kinds of rays and get the different results of each. Dr. Abbe thought that the whole question of the popular stories of radium in the treatment of cancer, as written in the press, should be suppressed.

Whether applied to papillomata, those heaped-up cell masses of the skin and mucous membrane, to the epitheliomata of the skin and mucous membranes, or to those increased formations of the squamous cells or basal cells of the skin or to the myeloid tumors, those central tumors of bone, or the pure myomata or the tumors of glands like the parotid or thyroid, to all invasions of the normal tissue with overgrowth of the cells normal to the part, the result is the same. These weaker cells are driven back into ordinary growth. The fact of the surrounding cells not being injured and these cells constituting the local disease being destroyed, shows that the weaker cells have been first attacked and that they have been destroyed. Troublesome papillomata of the vocal cords disappear very quickly under radium. Cases of this sort presented proof that mucous membrane cells are not affected by radium, while the papillomata cells were caused to disappear.

Nomenclature for Radium Therapeutists.

Pathologists may name tumors as they choose, but the nomenclature for radium therapeutists is (1) those tumors that are cured by the use of radium, (2) those tumors that are not cured.

The Penetrating Power of Radium.

To exhibit the penetrating power of the radium rays Dr. Abbe showed a picture of a granite boulder with a radium tube lying on it and a photographic plate underneath the stone. In this experiment some 50 milligrams of radium photographed itself through six inches of solid granite. This experiment has been carried out on a larger scale, passing through boulders as thick as twenty inches. If a piece of radium is lost upon the carpet and a plate is held over it, the portion there will photograph its own photograph on the plate. If the radium is not seen the piece of carpet can be sent to the laboratory and the radium present in it recovered there.

Dr. Graham Chambers asked, "Did you state that cancer cells return to normal?" Dr. Abbe said he did not mean that. "There is a reticulum that holds the normal cells together. We cannot see it, but in these cases that return to normal this reticulum must be there. In many of the tumors one has the feeling while working at it that there is a return to the normal line of growth of many of the cells composing these tumors. A papilloma under treatment is a good illustration of this. There there is a return to the normal line, but this is about as far as our knowledge here will take us. I began to see cases where I thought radium stimulated growth and then tried experiments with oats in different ways. One experiment was, that I took a piece of wood and split it into twenty layers, then laid some oats on each layer and put a radium plaque over them. Each quantity of oats was a little more distant from the radium. Then I took the seeds out and planted them carefully in rows. The findings in this experiment were the two rows nearest the plaque were killed, the three layers next were stunted, and the next four layers were very much stimulated. These last layers were distant from the plaque one to one and a half inches. Then came another confusing series. The rows of oats began to grow more and more poorly until the nineteenth row, which was affected most. Speaking of this to Madam Curie last summer she thought it was owing to the different action of the gamma and beta rays. There was here shown the losing effect from the beta rays and the gaining effect of the gamma rays. The conclusion here is that the alpha rays go a short distance, one-half inch, the beta rays go one and a quarter inches, and the gamma rays go any distance."

To illustrate the different kind of tumors one may deal with, Dr. Abbe used his lantern slides and showed the following pictures of cases:

Papillomata.

A case of warts on the lips. Radium was applied fifteen minutes and the warts disappeared like smoke and never came back; warts on the eyelid were treated in the same way and disappeared completely.

Photographs of warts on the soles of the feet. Treatment and results equally good. Dr. Abbe had seen twenty cases of this sort, and all were cured completely. He had had two cases lately where the middle toe was to be cut off, and radium applied for half an hour resulted in a perfect cure. In these cases the reaction does not take place for a week or ten days, then during

the second ten days the part becomes itchy and burns and at the end of thirty days the growth drops off as a scab and leaves a normal skin. Other cases were shown of warts on the tongue, lips, and mouth, also cases of leukoplakia. One of these was a papillary tumor of the tongue with tendency to malignancy. Radium applied one and one-half hours effected a complete cure.

Other very serious cases of warty growths on the tongue were shown next, and the effect of radium on these was most satisfactory.

The next cases shown were those of warts over the scalp, and these were easily cured without destruction of the hair; also cases of warty growths on the vocal cords, and these when removed showed no return after three years, though previous to that no surgical treatment was beneficial.

One case shown was that of a fibroma on one of the vocal cords. This was cut off and came back rapidly, and the larynx filled with papillomatous growths. Treating this case, Dr. Abbe took a tube of radium of one hundred milligrams and held it between the vocal cords for thirty minutes, and then a similar treatment after two weeks. In eight weeks the tumor was practically gone. The patient could talk, and in three months she could sing. The cords are now perfectly well.

Another case shown was that of warts of the vocal cords, where a young woman had lost her voice by the growth of papillomas on the arytenoids and between them. Radium was inserted between the cords for thirty minutes and the larynx is now perfectly healthy.

Keloid.

Another class of cases benefited is keloid. A view before and after treatment of a young girl who had herpes zoster on the side of the face, leaving a red, tender, itchy and burning keloid, which was continuing to grow larger, showed that three or four radium treatments of this condition caused it to change from its enlarged condition, some two inches in diameter and extending some quarter of an inch beyond the normal contour of the face, to a white, flat and perfectly normal appearance. Here Dr. Abbe remarked that true keloid yields to radium just as readily as false keloids. Here is a condition which yields to this form of treatment but will not yield to surgery.

Another case exhibited was that of a young man whose face was very badly burned by acid thrown on it by a girl he had jilted. The primary scarred condition of the face was improving under the influence of radium.

Naevi.

Cases of nævus were shown in the views, and all were completely cured through treatment. In these cases a radium plaque is laid over the deformity for ten, fifteen or twenty minutes, and this sets up a certain amount of inflammatory activity. As a result of this inflammatory reaction inside the blood vessels the nævus goes down to a flat scar in three or four months.

A birthmark on a lady's face was shown—one that nothing could remove except radium. This birthmark was two or three inches in diameter, extending over the side of the woman's face. In this case the condition was cured, the skin became soft and natural.

Dr. Abbe does not hurry these cases. He reports the results as better if two or three years are taken in treatment. Another view showed a case of lymphangioma of the tongue. The mouth was full, and the mass bleeding most of the time. This painful, large, granulating mass went right down under radium until now it is almost flat and the tongue never bleeds. Another of an ordinary hairy mole was shown to be easily cured by the use of radium. One severe case of this type was that of a young girl who had a large papillary hypertrophic mole of a blackish-purple color and about two inches in diameter on the back of her hand. This was cured nicely by the influence of radium. Another case shown was that of lichen planus of the neck, in which a complete cure was effected. Two cases of tuberculoma, one of the ear and another of the hand, were each beautifully cured by this treatment. These cases were treated several times with an exposure of one half hour each time. The plaque was merely laid over the tumors on each occasion.

Spring Catarrh.

Vernal catarrh, ordinary spring catarrh, that form which ordinarily lasts all summer and only improves in the winter, to return again in the spring, is greatly benefited. One case shown presented heaped-up granulations of the eyelids. Four of those cases he had cured by radium without the slightest trouble. Here the eye was cocainized and little lead plates used to prevent the effects of the radium on the eye itself. Then a piece of radium was moved back and forth under the lid for ten minutes. At the end of one month the patient was nearly well, and with another treatment the patient was perfectly cured.

Graves' Disease.

A girl, a trained nurse, had given up work because of Graves' disease. She had a large growth in the neck which had been getting worse for one and a half years. With cocaine as an anæsthetic a cut was made in the middle lobe and a radium tube passed into the opening and retained there for twenty-four hours, one hundred milligrams being used. In two months this goitre had practically gone, and now, nine years afterwards, she has no tachycardia, no exophthalmus, and the symptoms of goitre are not present, and she is perfectly well. In her case, two months after commencing treatment she was able to walk two or three miles and in three months she was playing tennis. Most of the goitres are not so successfully cured as this one, where the results were perfectly magical. In ordinary goitre there is simply a hypertrophic glandular structure, and in such conditions the influence of radium proves most beneficial. These conditions are found in the spleen, the liver, the parotid and the prostate gland, and most of them will yield to radium. Not all of them, however, and why some of them will yield and others will not, he did not know. Another thyroid case was shown, a typical exophthalmic goitre, which was treated by external application of radium. The radium was held about three inches away from the part, and applied no longer than one hour over each part of the growth, as it is not safe to allow the gamma rays to penetrate one part for a longer time than one hour or a blister will be produced and cellular change with ultimate fibrosis result. This woman greatly improved, but she went away to the country and began to get worse again and became so bad that her case was thought hopeless by her doctor. She came back and had another radium treatment and improved again. After this she came for treatment three times, with some general improvement. The method of treatment was then changed. Under cocaine an opening into the gland was made and the radium tube was slipped in one-half the thyroid over night and now she is on a fair way to full recovery. Another case shown was that of goitre going down below the sternum, so grave that Dr. Hartley refused to operate. For two years she had not been able to travel, and last year after treatment she was able to go to Europe. An X-ray was taken and showed a reduction of more than one-half the mass since commencing treatment. Ordinary goitre cases were shown, some cured and some not cured. While there are surgical triumphs in the treatment of goitre, some people will not have it, and in radium we

have a method that can be used to help that class. Another case of goitre where too much radium had been used and some necrosis was the result was cured. Also another one-sided goitre was reduced under radium treatment.

Parotid Tumor.

The next illustration of the effect of this form of treatment was a case of parotid tumor. Here the same strength of radium used in outside applications for goitre cases was used, namely, 150 to 200 milligrams of radium. That is enough to produce deep radionization through the tumor. He showed a man with parotid tumor—a mixed glandular sarcoma. On putting radium into it in two places, the growth shrank nicely and disappeared. He also showed a leukoplakia of the tongue which was completely cured. Another case shown was cancer of the tongue in a young woman. This was radionized. Result was that she was sent back to have half the tongue cut out and the remaining portion was again radionized when she came back. She is now perfectly well. Dr. Abbe next showed six or seven cases of basic-celled epitheliomata of the ear, which were completely cured by radium. Another case was that of epithelioma of the eyelid in an elderly man. He had gone to a New York hospital for treatment, but when they found he had hæmophilia the surgeons refused to touch it. A little tube was laid on for three or four minutes containing fifty milligrams of radium. The epithelioma disappeared in two months, and now, four years afterwards, there is still no sign of a return. Another case was shown where an epithelioma of the neck was quickly cured. A keratosis was cured in a few moments, also several cases of rodent ulcer and a basic-celled epithelioma of the interior canthus, all of which were completely cured. There was one case of rodent ulcer involving one-half the entire nose, and which was completely cured, although a bad scar remains.

A very interesting case shown was that of a cancer of the parotid gland, and this was a growth on the side of the neck of considerable size, lying chiefly in the posterior parotid region. A surgical operation on this case was done, but it was found that they could not get at the tumor to dissect it out: part of it being deep in the parotid sheath was adherent to the parotid tissue and the artery. As they could not remove all, a tube containing one hundred milligrams of radium was inserted. The wound was closed and the tube left in until next morning, when it was withdrawn. This patient was completely cured,

and has remained well for five years. She is as well now as she was ten years ago, five years before the operation was performed.

Cancer of the Nipple.

Photographs of a case of cancer of the nipple were shown. Radium took care of all these forms of cancer of the breast where the commencement was in the nipple rather than in the deeper parts of the gland. One of these cases where radium had cured cancer of the nipple now has cancer of the axilliary glands and of the stomach and she will die. It is reported that ten out of a hundred X-ray workers have gone to death by cancer. The early stages of X-ray disease show heaped-up masses of epithelioma. Later as the parts become more seriously involved operations have to be performed. A case of this sort was shown —an X-ray tubemaker whose fingers had to be amputated. He had several of these tumors, and radium was applied to each of them fifteen to thirty minutes, and to some one hour. Some of these growths stood out nearly one inch before treatment, but after, everyone of these dropped off and left smooth skin. In ten days the base of these growths became a little angry and red, and in ten days more the growth had disappeared. Dr. Abbe treated seven or eight X-ray men who had conditions very much like these. Some were so bad that skin-grafting, freezing, in fact, everything had been tried, but in all cases after about three applications of radium the growth dropped off, leaving the parts free and smooth.

The next slide was a section of one of the cancers of the breast. Here radium was used for a time and then the disease cut out. The action of the rays in this case on the tumor was well shown by the photography. The skin of the breast was burned and the growth was commencing to atrophy. There was an exudate of the lymphocytes, showing the effects of irritation. In this case one-quarter inch under the skin there were nests of cancer cells still left. These had not been radionized.

Sarcomata.

A case of scalp tumor was shown, a large irregular growth about the scalp. Here there was malignant growth of the scalp, and the dermatologist treating the case said there was nothing to do except scalp the man or try radium. Radium was tried, and before long the scalp became perfectly natural and the skin a normal white. Some time afterwards two growths came back. Dr. Abbe cut those out and the pathologist reported the condi-

tion as lymphogranuloma—a hair-splitting diagnosis. This was a beginning sarcoma, and radium had cured it.

Another case was that of a giant-celled sarcoma of the skull. This got on nicely under the use of radium. In 1905 a big fibroid of the uterus was treated, and in one year this was reduced to a small tumor lying over the fundus of the uterus. Another case of this sort was treated by passing radium into the uterus by way of the cervical canal. There was an active inflammation of the endometrium and radionization of the tumor tissues present in the vicinity. In both of these cases bleeding was stopped very shortly after treatment was begun.

A photograph of a large sarcoma of the leg with a portion of radium within it was shown. This sarcoma was destroyed and healed by a few such applications.

A case of myeloid sarcoma of the end of the humerus was shown to be completely cured by this form of treatment. In this instance several tubes of radium had been placed over the tumor. These tubes were left *in situ* for one day only as a general rule, but in this case it was left in seventy-two hours. In this case an osteomyelitis developed, and Dr. Abbe's assistant cut into the upper end of the bone. Next year the entire bone was removed.

A case being treated at present was one of a similar form of tumor in the lower end of the radius. The growth is shrinking and there is hope of benefit. Cases of lymphosarcoma of the chest, axillæ and groin, under external radionization after two months' treatment were shown to be either cured or reduced to one-quarter the original size.

Discussion.

Dr. W. H. B. Aikins, opening the discussion of Dr. Abbe's lecture and demonstration, said: "Dr. Abbe's excellent and illuminating address, which has been deeply interesting—even fascinating—throughout, discloses his great knowledge of the subject, and his true scientific viewpoint is beyond criticism. I should like to refer to the use of radium in the treatment of certain conditions of the thyroid gland.

Goitre.

"This is a field which Dr. Abbe was the first to develop, as in 1905 he treated a case of exophthalmic goitre by inserting radium tubes into the gland. As he has stated, in eight weeks

the goitre had considerably diminished and the nervous symptoms disappeared, and the patient has remained well since.

"I have myself used radium in fifteen cases of goitre. Nine of these showed evidence of hyperthyroidism, while six were of the simpler variety. Of the nine exophthalmic cases, in six the improvement has been most gratifying. The nervous symptoms disappeared, and the enlarged thyroids have decreased to a remarkable extent.

"In one case which I would like to mention particularly, the circumference of the neck was reduced from 14¾ to 12¼ inches. The exophthalmic symptoms were most severe, but quite disappeared under the treatment, which consisted of three series of exposures to radium of 280, 225 and 100 m.g. hours respectively, from November to April.

"In another case there had been enlargement present for some years. The enlargement was particularly in the middle and right lobes, which had lately been producing constitutional symptoms, and the circumference of the neck was fifteen inches. In a comparatively short treatment of 100 m.g. hours of radium the goitre decreased so that the circumference of the neck was only thirteen inches, and the nervous symptoms quite cleared up.

"In two of my nine cases of exophthalmic goitre, the improvement, although considerable, was not complete, and in one no improvement resulted.

"Of six cases of simple goitre, in four considerable reduction occurred in the size of the gland, the neck decreasing in circumference from three-quarters to one and one-half inches with almost complete disappearance of the enlargement. In one case, though there was a reduction of one inch in the circumference of the neck a large mass still remained present, and in one other which was reduced three-quarters of an inch the bulk of the goitre still remained. This particular one had been present for ten years. A great deal of fibrosis had evidently taken place, and therefore resolution could not so readily occur.

"Thus from my own observations which have been confirmed by what Dr. Abbe has told us this evening, one cannot help but conclude that the radium rays have a distinct place in our therapeutics of thyroid gland conditions.

"The ease and absence of discomfort with which radium plaques can be applied should be emphasized when one considers the highly nervous state in which many of those patients are with the dread of something going to happen to them."

Dr. G. S. Ryerson said he had never before seen a demonstration so satisfactory, so convincing and so obviously truthful

as this one. "Dr. Abbe has placed before us casts and photographs which are undeniable, and if I might be permitted to say it, his personality would appeal to any of us as that of a truthful man. There are some people who look on the radium business as allied to quackery. One wonders what kind of a man that man is who is making use of radium in the treatment of diseases. Where suspicion lurks venom will find origin in his spleen. It is like painting the lily to say anything more about Dr. Abbe's address. All present at this meeting have undoubtedly been greatly interested in Dr. Abbe's paper and beautiful demonstrations."

Dr. Hunter asked what result Dr. Abbe had had in the treatment of cancer of the uterus by radium.

Dr. Graham Chambers said he was very much interested in the remarkable results obtained. He thought if anything was to be said in criticism it should be directed to the wide application Dr. Abbe had made in the use of radium. This possibly comes from the fact that Dr. Abbe is also a surgeon. Men that work in dermatology and use radium do not in treatment make such a wide application of it.

Dr. King Smith was struck with the conservative method of Dr. Abbe. It was pleasing to hear him tell of the failures he had had. There is a wide impression that radium is a cure for all forms of cancer. The conservative report of Dr. Abbe should go to the press, that the better knowledge of the use of radium might be more widespread.

Dr. Herbert J. Hamilton said that in regard to the press the reporters had been denied admission, although requests had been made that they be allowed to be present. It was explained that Dr. Abbe's address would be technical and not of interest to the public. The mistaken knowledge of what constitutes cancer in the mind of the laity, is responsible for the reports in the press in regard to the use of radium for that disease. The public call anything in the shape of a growth on the skin a cancer.

Dr. Herbert A. Bruce referred to Dr. Abbe's case of sarcoma of the face that disappeared like magic under the influence of radium, and said that some eight or ten years ago he had a case of lymphosarcoma of the tonsil. This was treated by X-rays by Dr. G. R. McDonagh, and this tumor disappeared in a similar way in a week or ten days. This growth returned in three or four months with a fatal termination. He hoped a similar result would not occur in Dr. Abbe's case. He said the use of radium in the treatment of exophthalmic goitre recalled the fact

that at a recent meeting of this Academy one member advised the operation of short-circuiting of the intestines as a treatment for that disease. He hoped radium would prove more useful than this suggested treatment for goitre. In regard to the point that Dr. Abbe is a surgeon, and of wide experience in medicine, it is fitting that such as he should make use of radium, for in their hands this agent will not be used as the sole treatment of cancer. This treatment will not be used to replace surgery, but as an adjunct to surgical measures.

Dr. Albert A. Macdonald spoke of the scientific spirit Dr. Abbe had shown in speaking of his cases. He pointed out that if this spirit is held on to by the radium pioneers we will soon find it necessary to make positive statements to the public in regard to the value in treatment of this remedy.

Dr. W. H. B. Aikins, seconded by Dr. G. S. Ryerson, moved a vote of thanks to Dr. Abbe. The motion was carried heartily by the Fellows present, all of whom were greatly impressed by Dr. Abbe's address and splendid demonstration.

Dr. Abbe in reply said: "I would like to say one thing in accepting the vote of thanks. Cancer of the tongue is a troublesome thing to handle. Going over my records the day before coming to Toronto, I found that in thirty cases of cancer of the tongue and mouth, only one or two cancers of the tongue were cured. Most of the cancers of the tongue are not of the basal-celled type. They are of the squamous-celled variety, and this does not yield so readily to radium as does the basal-celled. I should say also that in every case but one of cancer of the mouth in men the patient was a heavy smoker. They were all heavy smokers. The best case I had was one with a taint of syphilis, and having a typical smoker's tongue. He had leukoplakia. After treatment he got well. Smoker's tongue is a mark against tobacco. Men who smoke from two to twenty cigars a day are the men who in from two to ten years get leukoplakia and ulcers, then hardening of the ulcers, and then serious disease. They will get well if treated early. Those men who get cancer inside of the teeth are men that chew tobacco. Only ten or eleven women had cancer of the mouth, and three of these were smokers. The other day a woman came to me from Oklahoma with her husband. She had a typical smoker's tongue. She said she did not smoke, but used snuff. She rubbed the snuff in with a toothbrush. She had a tobacco tongue. These cases of cancer of the mouth and tongue constitute a black mark against the practice of smoking. This fact is as plain as daylight."

REGISTRATION UNDER THE CANADA MEDICAL ACT *

R. W. Powell, M.D.,
Registrar of the Medical Council of Canada, Ottawa, Ont.

Allow me in the first place to express my appreciation of the compliment extended to me in giving me this opportunity of addressing this distinguished gathering of educationalists. I fully realize that it is the office I hold that has singled me out for this distinction, but, nevertheless, I feel that you will pardon an humble pride when I tell you that this scheme of "Dominion Registration" has for many years been very dear to my heart and that in season and out of season I have forwarded the measure to the limit of my capacity, and now when I find that within eighteen months of its fruition I am here in the flesh to amplify its measures to my colleagues of this great republic, I feel a sense of gratification not measurable in words.

Since the birth of the Dominion of Canada in 1867 the profession of medicine has never once lost sight of the unfortunate position it was placed in by reason of certain clauses in the British North America Act, which placed matters affecting education under the control of the provinces. It is fairly clear that such was not the absolute intention of the framers of that Act; but rather that what was intended to be included were matters of ordinary or common public education, and from that day to this the provinces have held out stoutly for what they honestly believed were their rights under the constitution.

With the birth of the Dominion came the birth of the Canada Medical Association, and at its first session in Quebec in 1867 under the presidency of Dr. Tupper, now the veteran Sir Charles Tupper, the question was introduced and discussed and a bill was actually framed about two years later to test the question in the Canadian parliament. So many obstacles appeared to be in the way that the scheme was dropped so far as the active political leaders were concerned. When I mention that Sir Charles Tupper, a prominent member of our profession in his day and a prominent and leading politician as well, felt that the scheme for a federal act was out of the question, you will realize that serious

* Read at the Tenth Annual Conference of the Council on Medical Education, Chicago, Feb. 24, 1914. Selected from Journal of American Medical Association.

difficulties must have been on the horizon. Sir Charles was not a man to be daunted by trifles and he was always the embodiment of loyalty to our profession.

I may add that years afterward (in the early eighties) I personally went into the matter with him, only to be told that the one and only way to accomplish our desires was by first securing an amendment to the British North America Act in the Imperial Parliament at Westminster—many of my hearers must know what a herculean proposition this would entail.

Our profession, always hopeful and never pessimistic, kept on bringing the question to the notice of the general body of practitioners as represented by the Canada Medical Association. From the time I joined the association in 1879 the point has never once been lost sight of, and it came about that the great mass of practitioners, constantly increasing in numbers and influence, became gradually permeated with a desire for some general scheme that might be called an inter-provincial reciprocity, or roughly, a breaking down of imaginary barriers so far as active practice was concerned. Committees were formed and discussions took place annually, but all to no purpose. It would appear that we were seeking the solution of an impossible situation.

The growth of the Dominion, the addition of new provinces, the establishment of new borders, all tended to tighten the rein, and the barriers became strengthened rather than weakened.

Equalization of standards and the creation of examining boards with corresponding similarity of ideals must be the preceding elements to interprovincial reciprocity. Then again, certain universities had acquired charter rights from the crown extending to all faculties, and this became a bar not easy to surmount in some quarters.

I must now digress for a moment to say that at a most opportune and auspicious moment a patriot and a prophet arose in our country, and to him was given a roving commission by the Canada Medical Association to inaugurate a scheme for the establishment of a medical council for Canada. I refer, of course, to Dr. T. G. Roddick of Montreal, late dean of the faculty of medicine of McGill. To say that Dr. Roddick threw his whole soul into this work would but feebly express my thoughts and his untiring services. He threw his time and his money as well as his energy into it and in 1896 actually sought and obtained a seat in parliament in order to be in a still stronger position to forward his measure. Could human devotion and enterprise go further than this? It necessitated hard work, much patience and diligence as

well as a refined diplomacy of a high order. Unbounded pluck and perseverance came to his assistance. He travelled the length and breadth of Canada on three separate occasions, met all the provincial councils, sympathized with them, argued with them, persuaded them to rise above provincialism, and while all this was going on he never lost an opportunity of bringing his scheme to the notice of the profession at large. It is gratifying to us all to know that his work has been appreciated and that on its consummation in November, 1912, he was unanimously elected the first president of the Medical Council of Canada by acclamation.

I most sincerely wish that he could have been here to-day to enter into the spirit of this meeting and to take my place on this platform by addressing you, but it was not possible. He begs me, however, to assure you that he is thinking of this meeting to-day and that while he can only send his benediction, his hopes and wishes are for the highest fruition of your endeavors and that they will be crowned with a result that will stand for what is highest and best.

The history of the creation of a Canada medical act can be told now without trespassing too long on your patience. I may say that the pivotal points of the act were few. Certain great principles had to be kept in mind, and possibly if I take these up seriatim I can the better elucidate what has happened.

I have told you that the provinces of our Dominion had certain charter rights specifically granted to them, and it was provided that as new provinces were carved out and given a constitution by the Dominion Government at Ottawa, these charter rights were to be automatically extended. One of these was education, and so it came about that each province has from time to time passed certain laws regarding the admission of men to the license to practice medicine. Certain bodies outside what we know as the regular profession also secured rights for their adherents.

It is evident now that the Parliament of Canada could not pass laws that would contravene the provincial rights, and I may say that on many occasions the framers of the Canada Medical Act were confronted with this awful bugbear. It was thought by some that beneath the wording of the act there must be some sinister influence lurking that would in some way undermine their privileges. It was not really so, because the Canada Medical Act to-day does not take away a single right of the provinces, albeit some years were spent in establishing the argument.

The first point then is that the Federal Act constitutes a body known as the Medical Council of Canada, giving it powers to

create an examining board and to establish a medical register for Canada. The next point was that the standard to be fixed by the council, the passing of which would entitle the candidate to be enrolled on the register, was at all times to be at least as high as that obtaining in any province of the Dominion. If the council allows the standard to fall below a certain plane and exception is thus taken to the Act by an aggrieved province, there is provision in the Act for a tribunal before which the matter is to be heard and settled.

The next point was the composition of the council. This really gave rise to much controversy owing to the unequal distribution of medical men in the various provinces and to the fact that if so-called justice was to be done as regards representation by population, the council would be an unwieldy, cumbersome body with its efficiency proportionately reduced. It was kept in mind that in this great country where I am speaking to-night the small state of Rhode Island had representation in the Senate equal to her sister states. I submit this subject to correction.

To leave out pages of discussion and argument, a basis was finally arrived at as follows: Each province of the Dominion through its medical council is entitled to send two representatives to the council, and they are to be chosen or elected in such manner as the particular provincial medical council may by by-law enact.

Then, each university having a teaching faculty of medicine, or medical school having university affiliations for granting degrees in medicine is entitled to one representative.

The homeopathic body, which has certain rights in all the provinces, is considered as a whole, and they elect three representatives from their adherents in Canada.

In order to cement this body and give the government of Canada a voice in the conduct of its affairs and to make it more or less an advisory body if need be, to the Canadian Government, the Governor-General in Council (which is the Dominion cabinet) has the right to send three representatives. On this point it is provided further that as certain of our western provinces have not as yet university representation, and until they do have it by virtue of the creation of faculties having degree-conferring powers in medicine and surgery, two of the three government appointees must be selected from one or other of the said western provinces to distribute as equably as may be the total body of the council over the entire Dominion.

Another point was that the Medical Council of Canada was to have nothing to do with matriculation or preliminary educa-

tion. The framers of the Act immediately conceded that this was eminently fair and in the spirit of the British North America Act.

Another important point which followed naturally from the foregoing is that holders of foreign diplomas must present similar certificates to those required of Canadian graduates.

This was necessary in order that the provincial authorities who must sign the certificates of those applying to come up for the Medical Council examinations, and who are not as yet licensed practitioners of any province of Canada, can satisfy themselves on all points as to whether the candidate has fulfilled all the requirements, including preliminary education and matriculation and the course of study subsequently.

A difficult question arose in considering the status of those who were already licensed in some province when the Act came into force. It was felt by certain provinces that it would possibly be to their detriment if the whole body could receive Dominion registration by paying the fee when the Act came into force and so receive registration in any province if they so desired. It was decided that a fixed time should be settled for a man to have been licensed before he could thus take advantage of the Act. It was pointed out that if a man had been six or seven years practising in a given locality, he would be more likely to have formed alliances and be more or less rooted in his habitat and that growing provinces would therefore not be liable to a stampede. After prolonged discussion and negotiation this period was fixed at ten years. Therefore, when the Act came into force those who had been licensed prior to the particular date and had been ten years so licensed could apply for and obtain Dominion registration by paying the fee and complying with certain ordinary regulations. This so-called ten year clause goes on for a time and applies to all who were licensed to practice prior to November 7, 1912. Thus, if a man was licensed in 1904 he can obtain Dominion registration under the clause when ten years have expired from the date of his registration, namely, 1914, and so on.

The result of this will be that the ten-year clause will be taken advantage of more largely in the first few years of its operation than later, and after ten years have elapsed there will be only a few men seeking registration by this means, because the natural law is always operating and cannot be legislated away, namely, that we are growing older.

I come now to my final paragraph and about this there was much discussion and argument: At what date was the Act to

come into force? Leaving aside much detail of interesting argument, it was finally settled in the Act that it was not to become operative, but was more in the shape of a permissive bill, till all the provincial legislatures had legislated in effect that they agreed to its provisions and had so amended the medical act of the province that it provided that if A. B. presented himself to the registrar of the province holding a certificate that he is enrolled on the medical register of Canada, he is entitled to be registered on the register of the province as a licensed practitioner by complying with the ordinary regulations in that behalf, such as paying the customary required fee, etc.

THE USE OF THE PINEAL GLAND IN THE TREATMENT OF CERTAIN CLASSES OF DEFECTIVE CHILDREN

By William N. Berkeley, M.D., New York.

After reciting how he became interested in the pineal gland (*Medical Record*) and the research work prosecuted thereon, Dr. Berkeley tells of the form of the gland used as a medicament, the results with young animals, and then the clinical facts in the case of certain classes of retarded children. The first and last are here of practical interest. Latterly the glands of young bullocks have been exclusively used, calves' glands being not obtainable in practical quantity. The fresh glands are rapidly dried, mixed with milk sugar, and put up in capsules; each capsule corresponding to 150 pounds of bullock—live weight. This is a physiological dose; and the capsules are not unduly expensive considering that the dose is small. They are obtainable at New York pharmacies. The ordinary dose for a child of 25 or 50 pounds weight is one to two capsules a day, best after eating. If the child cannot swallow a capsule whole it may be opened and spread on buttered bread or given dry. It is harmless to the stomach; no other preparation or "extract" is recommended.

The remedy was given a fair trial on a large number of cases. On simple physical dwarfism with good mentality it soon became evident these were subjects for pituitary medication only. It has had a fair trial on 100 mentally defective children; and a large majority of these were without physical stigmata. No experi-

ments on cretinism were made. No result in one case of an amaurotic idiot. Negative results upon a few congenital idiots. Little or no response in mental defectives of any class over fifteen years of age. Some progress in two mongols. At Vineland, N.J., a four months' test was arranged. Some twenty-five subjects and twenty-five controls started upon the experiment; twenty-one subjects and fourteen controls finished, each child being grouped with the child or children nearest him in heredity and mental age, all being under the regular dietetic and educational routine of the institution. Several of the subjects were congenital idiots and these made no progress. Fourteen of the others made a gain, twice the normal and more than twice the progress of the control children in the same period. Some advanced .8 of a year; one 1.8 of years. In New York other experiments with other children showed more or less response. Those well marked by organic defects showed a uniform exception. Cases are given in detail. From the experiments and observations, Dr. Berkeley says the pineal gland is going to be a remedy of great value in many cases of retarded mentality in children. It has proved of great value in about a dozen patients with premature mental failure without a distinct organic cause. Some decline positively to be without it; and from their cheerfulness and mental activity while under its influence, it definitely stimulates the aging brain to the faster chemistry of younger days. It must be borne in mind that in caring for defective children their progress is slow and that the medicine must be systematically given for from four to six months. The coincident educational training must be accurately adapted to the precise mental age.

THE NON-EMPIRICAL TREATMENT OF DIABETES—A REVIEW OF MENYHERT'S THEORY

By S. Ringolsky, M.D., San Francisco.

In *The Therapeutic Gazette* for March, a review of Menyhert's theory appears. This theory calls for the treatment of diabetes according to the science of pathologic physiology rather than that of the empirical diet. It is not held to be an absolute cure, but the results obtained are said to far exceed the empirical method. In six years, under this treatment in Budapest, six hun-

dred severe cases have been treated without a single case of diabetic coma. The Menyhert theory is that there must be a saccharificating ferment present in the living organism or formed during digestion and when it predominates sugar is formed from fats and albumins which are not decomposed properly by their ferments. The lipolytic and proteolytic ferments are the balancing or equilibrium ferments to the diastatic ferment. A diabetic who has had polydipsia, polyuria and polyphagia and who metabolizes sufficient to maintain a certain reduced body weight is said to be in pathologic equilibrium. He must be brought back to physiological equilibrium and maintained there. In his case the saccharificating ferment predominates.

Menyhert does not feed by calories. The patient eats what the doctor orders until satisfied. He keeps track of the weight, and increases the diet if necessary. The portions ordered vary from 200 to 300 grammes each. Vegetables are used in large amounts. Meat, fish, cheese, wine and eggs are all on the diet list. The yolks of eggs are alone used in severe cases. Fats are restricted in severe cases. Menyhert has kept patients four to five months without carbohydrates and brought them back into a physiological equilibrium. Acetone may appear or increase, but sooner or later disappears.

Menyhert claims that it has been an error to give the three ferments in organotherapy when only one or two were essential. The diastatic ferment should be eliminated. He separates the three and uses only the lipolytic and proteolytic. As a proteolytic ferment he uses papain in pills, each containing 0.3 gm., keratine-coated; for his lipolytic ferment, steapsine, in 0.3 gm. pills, keratine-coated; for his alkali, sodium bicarbonate in 0.5 gm. pills, similarly coated. Thus they can pass through the stomach unaltered and disintegrate in the intestinal tract. In severe cases, he takes advantage of the frequent urination at night and gives large doses of bicarbonate of soda six hours after the evening meal in order to obtain rapid alkalinity of the patient. The urine and feces are the guides; they must be alkaline to litmus. About 20 to 25 grammes of the alkali are given per day—a few grains every half hour, the soda being reduced or increased as desired. Very often six, ten or fifteen doses a day are sufficient. The papain is given three times a day, one hour before meals, in doses of three to six or eight to twelve a day, as the case demands. The lipolytic ferment is usually given when an increased amount of fat is prescribed in the absence of acidosis. One or two doses a day are given for a short time and then discontinued. Mineral

waters are forbidden. Diarrhea must be checked. One movement a day is recommended. Opiates to check the bowels, if necessary. When edema appears on the extremities then the alkali is reduced in quantity or left off entirely for a day, and a large dose of sulphate of magnesia on an empty stomach administered. Complications are treated as they appear. Conclusions: (1) The Menyhert ferment therapy has merit; (2) It should be tried by every physician who fails with the empirical diet; (3) Every diabetic can be put back into a physiologic equilibrium and maintained as such by the use of the ferments; (4) No diabetic should succumb to diabetic coma.

A NOTE ON THE MANAGEMENT OF BURNS

John C. Plain, M.D., Ransomville, N.Y.

There are four things (*American Journal of Surgery*) to take into consideration in treating burns, any one or all of which come up in a given case:

First—To combat the shock, if it exists.

Second—To relieve the pain and nervous excitability.

Third—To prevent infection and protect the exposed living tissue.

Fourth—To help Nature in her work of repair.

(1) Shock, which often occurs as a result of severe burns, is treated on general principles, too well known to be discussed in this paper. It has been said that "shock is shock," meaning that, regardless of its cause, shock must be treated in the same manner under all conditions.

(2) To relieve pain and nervous excitability I think it best to give a hypodermatic injection of morphine and atropine. The size of dose varies according to the age of the patient and the severity of the case. Then immerse the burned area, if it be an extremity, in cold water to which has been added either a teaspoonful of bicarbonate of soda or common salt to a quart of water. A temperature of about 50° or 60° F. is preferable. If the burned area, on account of its location, cannot be immersed in water, it may be covered with a light, smooth cloth which has been dipped

in the solution; then by gently and continuously applying the solution to this cloth the same result will be obtained. This water-bath may be continued for some time, or until the systemic effect of the morphine is manifested. In institutions where trained assistants are always at hand the whole bath may be used and continued for days, if a large area of the surface of the body is burned.

(3 and 4) Protection of the tissues and prevention of infection demand our greatest efforts and must be kept in mind from the first. Nature puts forth her greatest efforts, and the system will exhaust its entire resources to accomplish this end; but Nature cannot prevent the invasion of pus-producing microörganisms. The surgeon may.

I wish to condemn two things often done that are sanctioned by most of our text books. First, the puncturing of blisters immediately after a burn; and, second, the use of carron oil and other remedies of this kind as a protecting dressing. A blister is a non-irritating protection to the delicate underlying tissues, and we can furnish none better. I have never known the raised epidermis to reunite with its base after the blister was punctured. In most cases it acts as an irritant, and for several days following it causes serum to be poured out under the dressings, to soil them and furnish a good culture for any possible pus-producing germ that may be waiting for a chance to assert itself. Within a few days the epithelial cells in the deep glands of the skin will have accomplished their work of repair if properly protected by the blister. If any blisters are accidentally burst, with the epidermis rolled up or displaced to any extent, it is better to remove such epidermis at once.

I consider the following line of treatment the best for preventing infection and protecting the tissues. After the patient is fairly comfortable the bath may be discontinued and the burned area with the surrounding surface sprayed or mopped with hydrogen peroxide. The entire surface should then be mopped with dry gauze. Then apply strips of gauze which have been previously soaked in a 2 per cent. solution of picric acid in dilute alcohol. Over this apply a thin layer of cotton and hold in place with adhesive strips or a roller bandage. This dressing may remain until it is soiled, at which time remove all soiled or wet dressings, clean with hydrogen peroxide, mop dry, and re-apply fresh gauze soaked in the picric acid solution. About the third day open all blisters and mop away the fluid contents, applying a fresh dressing as before.

I think that this is the best treatment for all burns whose severity is not great enough to cause sloughing. If sloughing does occur as a result of charred tissue, or later as a result of infection, the dead tissue should be removed as rapidly as it becomes loosened. Then the underlying exposed surface is cleaned with hydrogen peroxide, dried, and mopped with the picric acid solution. Over this put strips of rubber tissue that have been kept in a bichloride of mercury solution, 1 to 1,000. Then apply the picric acid compresses and cotton as before. The astringent action of the picric acid limits the exudation of serum by constricting the congested superficial capillaries, and does not interfere with the development of the new epithelium. Its antiseptic action prevents infection, and I have never seen any systemic toxic effect. The rubber strips furnish a non-irritating covering for the denuded surface, and do not disturb the granulations when they are removed. If the rubber tissue is applied in narrow strips and the edges permitted to overlap, the dressing will more perfectly congeal to the irregular surface. This dressing should be changed as often as is necessary to keep the surface clean and free from pus.

The treatment above outlined, allowing for modifications in each individual case, is one which I consider most nearly ideal with every degree of this most common accident, from a slight scald to that produced by the most terrific gas explosion.

Amebic Dysentery. — Rogers (*B.M.J.*) reports marvellous results from India of the use of hypodermic injections of emetine in amebic dysentery. In fact this discovery is being hailed as one of the greatest therapeutic discoveries of the day. It has been proven to be so powerful as an amebicide as to be effective in dilutions of 1 to 100,000. When Rogers had the inspiration to use emetine hypodermically, he found it had no bad results. One-third to one-half a grain of the hydrochloride as it is more soluble than the bromide, represents 30 grains of the crude drug; and as 100 grains or more daily was often found necessary, the emetine may have to be pushed similarly. The amebae disappear in a few days, or hours even, the bleeding is checked, and the stools become normal. Moribund cases are soon up and about. Emetine is said to rarely fail.

THERAPEUTIC NOTES

Exposing Lower End of Ureter. — E. S. Judd (*Annals of Surgery*) approaches the lower end of the ureter by a median suprapubic incision from the symphysis to the umbilicus. This extends through the fascia between the recti muscles down to the peritoneum. The peritoneum is not opened but brushed back from the fundus of the bladder in the usual way. The bladder is lifted well forward, the space packed off with gauze, and then the viscus is opened. It is opened to explore and pack the diverticulum to facilitate in removing as well as to ascertain the relationship of diverticulum and ureter, so that the latter would not be injured in removing the pouch. As the latter could not be satisfactorily done within the viscus, an assistant holds the wall of the left side, and then dissection is carried down to the base of the bladder. This exposes and frees the ureter for two or three inches. It is then held to one side while the diverticulum is separated from surrounding tissue and removed. With the ureter in sight, the opening in the bladder is closed. Thus the ureter is not injured nor its lumen interfered with. The wound healed readily by primary union and the patient was around in ten days. In two cases for stones in lower ureter the bladder was not opened. The method was also used in three cases of extra-peritoneal resection for cancer.

Prostatectomy.— John B. Deaver (*Annals of Surgery*) gives the advantages of suprapubic over the perineal operations. By the suprapubic route the approach is simple and practically bloodless. Adenomatous growths are enucleated with ease. There is a large working field under perfect control. The prostate is easily accessible and more so with digital pressure in the rectum. No danger of injury to the bladder from the use of tractors as in the perineal operation. Incontinence, therefore, follows less frequently. Permanent fistulas are less frequent. If the urethra is bougied they never occur. Stones can be more readily removed. The question of sterility is rarely of any confidence. The mortality is no greater, in properly selected cases and the percentage of uncomplicated cures is larger.

Acne.—H. Buchholtz (*Ber. Clin. Wochen*) has used a powder consisting of equal parts of yeast and boric acid with success. The skin is softened and then a thin layer of the salve is rubbed thoroughly in once a day. Sometimes the powder was made with two parts of yeast to one of boric acid.

Uterine Hemorrhages. — Focke (*Ther. der Gegen.*) states that for uterine hemorrhages without an organic base, digitalis is a powerful aid to the local measures applied, being particularly useful in hemorrhages during a pregnancy. It is also very useful in recurring menorrhagia in the young and the elderly: in fact in all cases in which the uterus is apparently sound, but disturbance in circulation causing transient congestion. Focke has used digitalis in one hundred cases in the last fourteen years. In excessive or too frequent menstrual hemorrhage he commences a week before the anticipated period. Coffee must be dropped, as it appears to counteract the effect of digitalis.

Dyspnea. — J. A. Groher (*Deut. Med. Wochen*) contributes an article, the tenth of the series, on sudden threatening conditions confronting the physician who has no previous knowledge of the patient. No matter how pressing the danger in dyspnea, the physician must give to it a brief study before applying symptomatic treatment. Removal of the cause must be the first consideration. Examine the throat directly, by laryngoscope, and finger, keeping in mind infection from diphtheria through a bite. The finger may discover retropharyngeal abscesses, edema of glottis or spasm of vocal cords, while the finger may cause by retching the expulsion of false membrane, foreign body, etc. If the dyspnea comes from pleuritic effusion or pneumothorax puncture. If of cardio-vascular origin, intravenous injection of digitalis; in anemia, oxygen or transfusion of blood. In venous congestion, venesection. If secretions in the bronchial tubes, ipecac or antimony and potassium tartrate in not too small doses every ten minutes may be needed. Cooling baths followed by a cool douche has an excellent expectorating effect, acting especially on the finer ramifications. In very severe attacks, narcotics. In frightened patients, the physician's suggestions for deep breathing help, as well as cold applications to the chest, rubbing, etc.

News Items

Dr. J. J. Middleton has returned to Toronto after six months in the British Isles.

Dr. G. B. Archer, who has been on a furlough in Toronto, has returned to Kangra, India.

Dr. George A. Watson, Toronto, has gone to practise in Detroit with his brother, Dr. C. E. Watson.

Dr. Cattermole has been transferred from Penetanguishene to the Woodstock Hospital for Epileptics.

The Jordan Sanatorium at River Glade, N.B., treated thirty-five patients from March to November last year.

Dr. D. N. Maclennan, Toronto, will sail for Naples the latter part of April, and will spend the summer in Europe.

Queen's Medical College Faculty has appointed Dr. S. M. Asselstine of Marlbank as lecturer in pharmacology and therapeutics.

Dr. Andrew R. Gordon, 345 Bloor St. W., Toronto, announces that hereafter he will confine his practice to diseases of the Cardio-Vascular system.

The Third Annual Conference of the Ontario Health Officers' Association will be held in Convocation Hall of the University of Toronto on May 7th and 8th next.

Dr. W. W. Deeks, formerly connected with McGill University as lecturer in zoology and demonstrator of anatomy, but for several years chief physician in the Ancon Hospital at Panama, has been in Montreal recently on his way to England and continental Europe.

The American Association of Pathologists and Bacteriologists met in Toronto on the 10th and 11th of April, under the Presidency of Professor J. J. Mackenzie. On the 9th the International Association of Medical Museums met in the Pathological Department, with Professor R. M. Pearce of Philadelphia as President; and on the same day the American Association for Cancer research met in the Toronto General Hospital with Dr. E. E. Tyzzer, Harvard University Medical School, as President.

Dominion Medical Monthly

And Ontario Medical Journal

EDITED BY

Medicine: Graham Chambers, R. J. Dwyer, Goldwin Howland, Geo. W. Ross, Wm. D. Young.

Surgery: Walter McKeown, Herbert A. Bruce. W. J. O. Malloch, Wallace A. Scott, George Ewart Wilson.

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Psychiatry: Ernest Jones, W. C. Herrman.

Ophthalmology: D. N. Maclennan, W. H. Lowry.

Rhinology, Laryngology and Otology: Geoffrey Boyd, Gilbert Royce.

Gynecology: F. W. Marlow, W. B. Hendry.

Genito-Urinary Surgery: T. B. Richardson, W. Warner Jones.

Anesthetics: Samuel Johnston.

GEORGE ELLIOTT, MANAGING EDITOR.

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COMMENT FROM MONTH TO MONTH

"**The True Aim of a Compensation Law** is to provide for the injured workman and his dependents and to prevent them becoming a charge upon their relatives or friends, or upon the community at large."

A workman who receives an ordinary cut, say for instance of the scalp or face, which generally heals readily under a week's time, under the new Ontario law, if he knocks off work, loses his wages for that week, suffers from the accident, and has the pleasure of paying for his surgical attendance, although the accident has been no fault of his. Wherein does he benefit under this law?

If he sustains an injury to a finger which in the ordinary run of finger accidents takes longer to heal than a scalp or face cut—say ten days' or two weeks' disability—he receives his wages for the total length of time he was disabled. If he is earning $15.00 per week and is off work ten days he receives a week and a half's pay, while his surgeon's bill will probably eat up one-half his receipts. The accident has been no fault of his doing. He suffers

as in the first case. Wherein does he profit much through this arrangement; and wherein is he provided for as an injured man?

If through negligence on the part of the employer, he, say an unmarried man, paying four or five dollars a week for his board and lodging, falls on a slippery floor and sustains a Colles' fracture, he will be probably disabled six weeks and will receive $90. Out of this he will pay for his board and lodging $30, and another $30 to the surgeon. Through the negligence of an employer he loses $60 to receive $30 with the pain and discomfort thrown in. Wherein is there much provision for the injured workman?

Workmen as a class are as good pay and as honest from the doctor's standpoint as any other class of the community; but an Act whose "true aim" is to "provide" for an injured workman should exercise complete provision and not tentative participation.

It is not fair to the workman to place the responsibility upon him of paying for his medical and surgical attendance, hospital attendance, nursing, etc. A severe accident calling for hospital attendance, nursing, operations, etc., will eat up all his wages.

With a chief medical officer and medical referees it should be impossible for that fearful bugaboo, medical overcharge, to eat into the Accident Fund to any great extent, or wrongfully. The majority of the workmen would have been better pleased and better served had the law provided for the payment of physicians, hospitals and nursing out of the Accident Fund.

ONTARIO MEDICAL ASSOCIATION

For the annual meeting in Toronto, May 26th, 27th and 28th, it is most important that an unusually good attendance should be present. The Committees have got their work well in hand and there promises to be one of the best meetings held for some years. But the meeting is of first importance on account of the agitation for withdrawal from affiliation with the Canadian Medical Association. There seems to be no question that present arrangements between the two are unsatisfactory to a considerable portion of the membership of both in the Province of Ontario. The occasion will call for calm, frank and judicious discussion, for, apparently, no one desires to injure either but to benefit both.

Editorial Notes

REPORT OF COMMITTEE OF THE ACADEMY OF MEDICINE OF TORONTO RE WORKMEN'S COMPENSATION BILL

The Committee's report was as follows:—

As the mover of a motion at the last meeting of the Academy of Medicine, March 3, 1914, which was carried unanimously I have been asked by the President to introduce the subject of the motion to the Fellows now present. The Committee then appointed have been supplied with a copy of the proposed Act entitled "Laws relating to the Liability of Employers to make compensation to their employees." I presume other members present have looked over the proposed bill. We are now assembled to consider the bearing such an Act would have on the rights and interests of the medical profession of Ontario and to take such action as this Academy deems necessary. First I would draw your attention to the reason given for the proposed Act. The basic principle is that the industries causing the accident and injury to the employee or employees should bear the cost of such injury and that the injured employee's relatives or friends or the municipality or state should not be put to the expense of caring for such a person.

By the proposed act the injured person is to bear the cost of his outlay for medical and surgical treatment or other necessaries. Page 15, Sir R. W. Meredith, second Interim report addressed to the Lieutenant-Governor of Ontario, October, 1913.

Sir R. W. Meredith says, in his report to the Lieutenant-Governor, October, 1913: "In these days of social and industrial unrest, it is, in my judgment, of the gravest importance to the community that every proved injustice to any section or class resulting from bad or unfair laws should be promptly removed by the enactment of remedial legislation and I do not doubt that the country whose legislature is quick to discern and prompt to remove injustice will enjoy, and that deservedly, the blessing of industrial peace and freedom from social unrest. Half measures which mitigate but do not remove injustice are, in my judgment, to be avoided." *We think this should be applied to the Medical Profession.*

Under the present existing Employees' Compensation Act, the medical or surgical expenses become an important part of the claimant's account for an award from the Court for his injuries; Sec-

tion 35 is the only reference to any compensation to the medical profession under the proposed Act. The section reads, "Where a workman leaves no dependants such sum as the Board may deem reasonable for expenses of his medical attendance and his burial shall be paid to the persons to whom such expenses are due." The list of possible dependants includes (members of the family, M. page 24 of report.) M. "Member of the family" shall mean and include wife, husband, father, mother, grandmother, grandfather, stepfather, stepmother, son, daughter, grandson, grand-daughter, stepson, stepdaughter, brother, sister, half-brother, and half-sister, and a person standing in loco parentis to the workman, whether related to him by consanguinity or not so related, and where the workman is the parent or grandparent of an illegitimate child, shall include such child, and where the workman is an illegitimate child shall include his parents and grandparents.

The medical man's chance of being paid anything under this clause seems very remote.

The physicians are specially interested in the industrial disease schedule, page 50, section 96, which reads, (1) Where a workman suffers from an industrial disease and is thereby disabled from earning full wages at the work at which he was employed, or his death is caused by an industrial disease and disease is due to the nature of any employment in which he was engaged at any time within twelve months previous to the date of his disablement, whether under one or more employers, the workman or his dependants shall be entitled to compensation as if the disease were a personal injury by accident and the disablement were the happening of the accident subject to the modifications hereinafter mentioned, unless at the time of entering into the employment he had wilfully and falsely represented himself in writing as not having previously suffered from disease.

Industrial Diseases.

Anthrax (handling of wool, hair, bristles, hides and skins). Lead poisoning or its sequelæ (any process involving the use of lead or its preparations or compounds). Mercury poisoning or its sequelæ (any process involving the use of mercury or its preparations or compounds). Phosphorus poisoning or its sequelæ (any process involving the use of phosphorus or its preparations or compounds). Arsenic poisoning or its sequelæ (any process involving the use of arsenic or its preparations or compounds). Ankylostomiasis (mining).

These diseases are to be treated as accidents. Other countries with somewhat similar legislation as is proposed in this new Act have made provision for surgical and medical care, and the cost thereof is charged to the industries causing the injury or disability.

In the following States of the Union to the south of us, provision has been made for medical and surgical aid: California, reasonable during first ninety days, not exceeding $100; Illinois, necessary medical, surgical and hospital services for eight weeks, not exceeding $200.00—necessary services of physicians and surgeon eight weeks without limitation on amount; Kansas, New Hampshire, Nevada, none unless employee dies leaving no dependants; New Jersey, during first two weeks, not over $100.00; Massachusetts, Rhode Island, during first two weeks reasonable medical and hospital services and medicines when needed; Michigan, reasonable medical and hospital services and medicines during first three weeks; Ohio, such as Board may deem proper, not exceeding $200.00; Washington, fifty per cent. of benefits added for first six months of total temporary disability, not more than 60 per cent. of wages in all; Wisconsin, reasonable for first ninety days, includes medicines, appliances and hospital.

In the proposed act we cannot attach for payment of medical services any award during life of injured man or any award which goes to his dependants in case of death.

From the First Annual Report of the Industrial Insurance Department of the State of Washington, U.S.A., we note page 280, D, the Government Commissioners say:

"There is no question but that there is an insistent demand on the part of the injured workmen, their families and friends for some amendment to the act whereby victims of work accidents will be given immediate and thoroughly competent medical attendance after an accident, and that the cost of such treatment be paid by the Employer directly or by the State out of some fund, or indirectly by an increase in the scale of awards sufficient to cover the cost in all cases."

Dr. J. W. Mowell, Chief Medical Officer of the Board for the State of Washington, says: "This report would not be complete without paying a tribute to the Medical Profession for the share they have had in making this law a success." Further on he says: "I take this opportunity of thanking them, since thanks and kindly feeling are all the Commission is yet able to offer."

We are so familiar with these votes of thanks and eulogy of the Medical Profession where words cost nothing that it almost nauseates the man of experience.

This proposed act will apply all over the Province of Ontario. The employees under this new Act will have to bear the burden of all costs for surgical or medical attendance, nursing and necessaries. After an injury the workman's wages cease immediately. There will be an injustice done to the members of the medical profession by imposing on them the duty of attending accident cases without any provision for remuneration. There will also be the added liability for suits of malpractice if the patient is not satisfied with the results secured in his case. Our present rights to be paid for our services as part of the damages recoverable under the Employers' Liability Act now in force and under the common law are to be taken away.

A committee was appointed two years ago this last February to present the views of the Academy of Medicine to the Commissioner as to the effect the proposed legislation would have on the medical profession. We have a copy of the letter sent asking for a hearing and an acknowledgment of its receipt from the Secretary of the Commission. No appointment was granted.

Before concluding, we wish to assure the gentlemen present and the other members of the medical profession of Ontario that there is no politics in this movement, that we are actuated solely by a desire to present our views to the proper authorities so that the interests of the registered members of the College of Physicians and Surgeons of Ontario be not overlooked before this proposed act becomes law.

I am sure you will agree with me when I say that the people of this Province, including all classes, owe a debt of gratitude to Sir William Ralph Meredith for his work as Commissioner appointed to investigate and recommend a just and economical means of compensating employees who have been injured. The fund of information which he has collected and his judicial opinions will be of inestimable value.

As Sir William says, "He does not claim that the proposed act is perfect nor that the last word has been said," when he made his recommendation for its adoption to the Government.

We would recommend that the proposed bill, "Laws relating to the Liability of Employers to make compensation to their employees for injuries received in the course of their employment," have the following sections added:

Section 33, subsection 1, by adding thereto the following:

"And such sum as the Board may deem reasonable for the expenses of his medical attendance and hospital care, to be paid to the persons to whom such expenses are due."

Section 33, subsection 2, by adding thereto the following words:

"And a further payment of such sum as the Board may deem reasonable for the expenses of his medical attendance and hospital care, to be paid to the persons to whom such expenses are due."

Section 36, by adding thereto:

"And such further sum as the Board may deem reasonable for the expenses of his medical attendance and hospital care to be paid to the persons to whom such expenses are due."

BRUCE L. RIORDAN,

Chairman of Committee.

The report was adopted unanimously and a copy of same ordered to be sent to each Fellow of the Academy.

ADVERTISING BY PHYSICIANS

(*J. A. M. A.*)

Following the midwinter Conference on Public Health, Legislation and Medical Education of the American Medical Association, held in Chicago, February 23 and 24, numerous news items and editorial comments appeared in the public press regarding one of the papers presented at the Conference. The substance of the newspaper items was that the American Medical Association was considering the revision of its principles of ethics with a view to removing or modifying the restrictions placed on individual physicians as to personal advertising. Some of the reports stated that revision of the principles of ethics would be taken up at once, and that an overwhelming majority of members of the Association were in favor of such a change. So far as we know, there is no intention or indication of any change in the position of the American Medical Association on this question; the reports in the newspapers were due to a misapprehension of the character of the paper in question and the intent of the writer.

The paper was an argument for a better understanding and closer co-operation between the medical profession as an organization and the newspaper publishers as a class. The author did not advocate or discuss the question of personal advertising on the part of physicians; the proposition set forth and defended in the paper and presented to the Conference was something en-

tirely different from personal exploitation; it was a plea for closer co-operation between medical organizations and the press for the public good, and not for personal benefit. It suggested that the expert knowledge of the medical profession could be utilized by the public press in two ways: first, by the dissemination through the newspapers of scientific knowledge which would be of value to the public in preventing disease, and second, in placing at the disposal of those newspapers which desired it the expert knowledge of the medical profession in separating worthy and reputable from dishonest and disreputable institutions which might seek publicity through the newspapers.

Of these two important activities one has already been inaugurated by the American Medical Association, and the other is worthy of serious consideration. Neither of them, however, has the slightest bearing on the question of personal exploitation of physicians through newspaper advertising or by any other means. An honorable physician could not conscientiously advertise for personal business, for the same reason that the honorable minister and lawyer would not advertise. A professional man has no commodity to sell; his only assets are his scientific knowledge and his personal ability; and he who claims to possess greater knowledge or greater skill than his professional associates—whether physicians, preachers or lawyers—is an egotist, or worse, and forfeits the respect of both his professional brethren and his fellow citizens.

THE UNIVERSITY OF TORONTO

requires aid from the Treasury of the Province of Ontario to the extent of $1,400,000. There is a deficit of $85,000 to be faced and one of $120,000 for next year. The Provincial University is an institution to be proud of and should be dealt with generously by the Province. A student-body of four thousand drawn from all parts of the province and a university which is among the first-class institutions of America, located in Toronto, might very well receive an annual contribution of substantial dimensions from the City of Toronto as well as from the Province. There is a splendid chance for some private citizen of the province with the money to win a name for himself as a great philanthropist. It has not been unusual in other cities. Why not in Toronto?

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Original Articles

POINTS IN THE DIAGNOSIS AND TREATMENT OF SYPHILIS*

H. B. Anderson, M.D., L.R.C.P. (Lond.), M.R.C.S. (Eng.),
Associate Professor of Clinical Medicine, University of Toronto.

At the outset permit me to thank your Association for the honor of addressing you to-night. In casting about for a subject which might be of interest to you as practitioners, along the lines of my experience as a pathologist and afterwards as a clinician, I have selected Syphilis, and this for several reasons. In the first place the important discoveries of recent years—that of the spirochete pallida by Schaudinn, the complement deviation test by Wassermann, and the therapeutic value of arseno-benzol by Ehrlich—have awakened a worldwide interest and stimulated an amount of investigation that have not only been fruitful of great practical results, but have revolutionized our conception of certain phases of the disease. In the second place the medical profession in all parts of the world is taking hold of syphilis as a serious public health problem. At the recent meeting of the International Congress in London, Ehrlich was undoubtedly the outstanding figure, and the attitude toward syphilis was the outstanding feature of the Congress. As a result of the interest awakened by the Congress a Royal Commission has been appointed to consider the problem of syphilis and to suggest means of abating what is generally recognized to be a menace to the national welfare. We may therefore, expect to see a campaign inaugurated similar to those against tuberculosis and cancer, and with even greater possibilities of success.

To us as Canadians the subject is becoming daily of more importance, especially in the large cities, owing to the influx from

* Read before the Brantford Medical Society, March, 1913.

the syphilis-scourged cities of the Old World of scores of immigrants who never should have been allowed entrance into the country. These people are crowding our hospitals and asylums, and thus have become not alone a serious charge to the community, but from the standpoint of Eugenics should furnish a subject for grave consideration. The results of an investigation recently made by my assistant, Dr. R. W. Mann, of 198 consecutive admissions into my service at St. Michael's Hospital, 128 males and 70 females, will illustrate what I mean. Routine Wassermann tests gave a positive reaction in 46.1 per cent. of the men and 61.4 per cent. of the women. The large proportion of these cases, of course, entered the hospital for treatment of acute conditions other than syphilis, and in most of the cases evidences of syphilitic infection were discovered only in course of the routine clinical examinations.

While one is prepared to admit that these statistics probably represent an uncommon condition, yet general experience since the introduction of the Wassermann test points to a much greater frequency of syphilitic infection than has heretofore been believed.

It is high time that we as a profession were alive to the seriousness of the problem which is being produced by lack of efficient inspection of immigrants, and that we should begin to make our influence felt, and initiate a campaign to educate the public to the danger to our national welfare arising from the ignorance or carelessness of officials or the cupidity of those who profit by the admission to our country of the mentally and physically unfit.

There is every reason to believe that before long the more efficient control of venereal diseases will be taken up as a public health problem. This will involve some form of notification and provision for the proper supervision and treatment of cases, as is now required in Queensland and other places.

Lastly, as a reason for bringing this subject before you, my experience has led me to believe that syphilis is frequently overlooked, and at times by experienced practitioners and clinicians, either as the primary cause of trouble or as an accompanying factor. Those of us who have followed the autopsies and clinics, especially the Dermatological Clinics in London, Vienna, New York, or other great cities, have, I am sure, all been impressed with the alertness of clinicians for possible manifestations of syphilis, and the readiness and assurance with which they recognize them. There is no practitioner of wide experience who does not know how prone we all are to overlook very common clinical

conditions, even in the presence of outstanding and definite signs, until our attention has been specially directed to them, and then, behold! they appear to be of comparatively frequent occurrence. As examples we may cite Graves' disease, appendix dyspepsia and duodenal ulceration.

While one is prepared to recognize the tendency for a clinician, following the hospital practice of a large city, to overestimate the frequency of syphilis in private practice in the smaller centres or in the rural communities, yet it is difficult for one to accept the frequent assurances of his professional colleagues that they seldom encounter cases in their districts. I beg leave humbly to express the opinion that they see cases oftener than they are aware of.

To bear out my meaning I should like to refer to a case coming under my observation a couple of months ago. A prominent doctor from a western town consulted me, giving the following history: In October, 1913, he developed an infection beneath the nail of the index finger of the left hand. The infection spread to the adjacent soft parts, and an incision was made by a colleague in the town, a small amount of pus being evacuated. The infection, however, spread upward, involving the epitrochlear and axillary glands. Antistreptococcic serum was administered, but the condition did not improve. There was never a high temperature. The patient next consulted a prominent surgeon in an adjacent city, who thought there was necrosis of the terminal phalanx and advised amputation, which was accordingly done at the metacarpophalangeal joint. He returned home, and for a time felt somewhat better, but developed so-called "grippy" symptoms and a "serum rash." Not feeling able to resume practice he decided on a holiday, and, accompanied by his brother, also a physician, went to Chicago. He consulted a well-known clinician, who thought he was neurasthenic and run down from his infection and the worries incident thereto. By some strange lapse, this physician, an exceedingly careful and competent man, did not strip the patient for examination. Had he done so he would have found a generalized macular eruption, the left epitrochlear and axillary glands much enlarged and very hard, and a generalized glandular enlargement to a lesser degree. In the light of this examination the whole case would have become perfectly clear. A Wassermann test confirmed the diagnosis, and arseno-benzol was used intravenously with a rapid clearing up of the symptoms.

The patient was unaware of having been in attendance on a case of syphilis. The case undoubtedly presented some puzzling

features, but a consideration of the unusual course of the infection and a careful physical examination, *if not absolutely convincing*, should at least have suggested a Wassermann test. All of the doctors concerned I know to be not only competent, but each in his own more particular sphere an excellent man, but not sufficiently alert to this particular form of infection. There is a special liability to mistake infections associated with extra-genital sores.

I have recently seen two cases of primary infection in the tongue of young married women of good social position, and one on the lower lip of a middle-aged man. In none of the cases could I trace the source of the infection, though in one of them I suspected an accidental infection, possibly from a cup or spoon, as I was attending the patient's cousin for secondary syphilis at the time, and he was a frequent visitor at the young lady's home.

Extra-genital chancres are more frequent than is generally recognized, Sequeira placing the incidence at probably one in ten, but he says that in Russia they are one to four. In some districts in Russia, from ignorance and bad hygienic conditions, Tarnovsky (quoted by Osler) says that 70 per cent. of infections are extra-genital. The examination of the serous fluid from a suspected sore for spirochete is a valuable and easy method for one accustomed to it.

I believe that if we dropped, or perhaps relegated to a very secondary place, Ricord's conception of syphilis as a disease characterized by a *primary sore*, and followed, in more or less orderly sequence, by secondary and tertiary phenomena, and considered the disease purely from the viewpoint of an infection, it would make for clearness of thinking. As with other infections, there is usually a single port of entry, where, after a period of incubation, the characteristic hard sore usually develops. At times, however, a number of points are infected simultaneously, and then multiple sores appear. A generalized infection, however, may occur without the development of a local lesion.

A few years ago I reported the case of a physician who, in removing some venereal warts, allowed the knife to slip, and inflicted a slight wound on the ball of his thumb. He immediately sucked the bleeding wound, and applied pure carbolic acid. Notwithstanding his prompt treatment a very intense general infection developed without the appearance of any sore at the point of inoculation. The frequency of a general infection without a local lesion is difficult to estimate, but it probably occurs oftener than has heretofore been believed. Sequeira says that in fully

20 per cent. of all cases, and in most women, there is no history of a sore.

It is well known that a mixed infection may occur, so that the appearance of a soft sore or a gonorrhea does not preclude the possibility of the spirochete having gained entrance at the same time. It is remarkable how frequently we find evidences of syphilis in patients who give only a history of gonorrhea. Soon after the appearance of the sore the nearest lymph glands become infected, and next the organisms gain entrance to the blood stream, and are distributed to all the organs and tissues, producing the general symptoms and symmetrical lesions characteristic of the septicemic stage of the disease. After a time the organisms disappear from the circulation and are deposited in different parts, where they may afterwards give rise to the *asymmetrical* lesions—the nodes, gummata, or vascular manifestations of the so-called tertiary stage. Recent investigations have shown that the central nervous system is invaded at a much earlier period of the disease than was formerly believed to be the case, though so far as symptoms are concerned the infection of the nervous system may remain latent for years. P. Ravaut (*Ann. d. Med.*, Paris, 1914) says that there is a *preclinical* involvement of the nervous system in 65 per cent. of cases in the secondary stage of syphilis. The discovery of the spirochete in tabes and general paralysis has proved that these lesions are due directly to the spirochete, so that the term *parasyphilitic* must disappear from the medical vocabulary.

The failure to recognize secondary syphilis is frequently due to an imperfect practical acquaintance with other skin diseases, from which it must be differentiated, but a *generalized eruption without itching*, and *associated with enlargement and hardness of the lymph nodes, especially the epitrochlears, sore throat, falling of the hair*, etc., is very characteristic. An experienced observer will often detect a slight enlargement and increased consistency of these nodes after all other signs of the infection have disappeared. This is important clinically.

It is well known that a high fever, with chills and other febrile symptoms, may be present during the secondary period. In the two cases of accidental infection in physicians, before referred to, the patients mistook these symptoms for an attack of la grippe. Typhoid fever and miliary tuberculosis are also at times erroneously diagnosed as the cause of the trouble.

It is not, however, the primary infection nor the secondary manifestations that are most frequently overlooked or wrongly

diagnosed, but rather the irregular manifestations of tertiary syphilis. The patient may have sought relief for conditions resulting directly from the old syphilitic infection, though in many cases he is suffering from some other illness, and the syphilis is merely a contributory or accompanying factor.

Mistakes in the diagnosis at this period are usually due to being off one's guard from a failure to recognize the frequency of syphilis, and consequently to make a careful routine examination for its signs.

As before mentioned, the history of the case is often uncertain and misleading, so much so that it is our custom to make the diagnosis by a thorough physical examination, and to enquire into the history and Wassermann test only for confirmatory purposes. In no case should we allow the history to discredit the data elicited by clinical examination.

Of especial importance is a thorough search for and a careful interpretation of the significance of scars. Scars about the glans penis or prepuce, owing to the looseness and wrinkling in the tissues, are often difficult to find or to feel assured of.

There is no readily accessible, definite and valuable feature of a routine clinical examination which is so often neglected as that of looking for scars. There are relatively few pathological conditions resulting in scar-formation, and if we consider them it will appear how readily, by a little practice, they may be differentiated. One may enumerate such causes as injuries, burns, scalds, in which cases, not only the appearances presented, but the history, will direct one to the diagnosis. The scars on the backs of the hands and arms of cooks, and those on the thighs and legs of blacksmiths or workers with molten metal, are very characteristic. We must not forget, however, that trauma may not infrequently be *merely the localizing cause of a syphilitic lesion.* A few years ago I was consulted by a woman who had been stung in the forehead by a bee. A lump developed, and when I saw her she had an ulcerated area the size of a fifty-cent piece. The case cleared up rapidly under mercurial treatment. Such cases point to the wisdom of arriving at a diagnosis before inquiring into the history, which might readily have tended to mislead.

Of other common causes of scar formation, smallpox, acne vulgaris, furunculosis, lupus erythematosus, varicose ulcer, each gives its own characteristic features, distribution or history. Tuberculous scars are mostly on the neck or overlying lymph glands. Favus, tinea barbæ, acne varioloformis, rhino-scleroma,

and a few other rare conditions, are not of great practical importance in this connection as causes of scar formation. Leprosy also is infrequent in this country, but two cases in Chinamen, which I have seen during the past two years, suggest that in Orientals at least this disease should be kept in view. Both cases, however, had the characteristic facies and anesthetic areas of leprosy. The danger of a mistaken diagnosis is increased by the fact that leprosy often gives a positive Wassermann reaction. In one of these Chinamen the physician diagnosed syphilis, and proceeded to give him an intravenous injection of Neosalvarsan. By mistake a tube of Salvarsan was mixed with the distilled water, and given him without neutralization. The Oriental turned up a few days later saying he felt "velly well," and presented no ill effects from the procedure.

If, therefore, we consider all the different conditions producing irregularly distributed scar-formation it will be readily seen that, apart from trauma, syphilis is by far the most frequent cause. If we further consider such characteristic features of syphilitic scars as the punched-out appearance, especially in miliary scars, the surrounding pigmentation when recent, the "tissue paper" or "silky" surface when larger and older, the scalloped or serpiginous outline, their asymmetrical distribution, often on the sides or behind the legs or thighs, on the flanks, abdomen, sides of the chest, or areas inaccessible to injury, or unusual for other lesions causing scar-formation, the diagnosis is usually not difficult. Confirmatory evidence may at times be obtained from the deeply fissured sclerosed tongue of syphilitic interstitial glossitis, from the persistence of slight enlargement and hardening of the lymph glands, especially the epitrochlears, and lastly from the history of the case and the Wassermann and luetin tests.

Just here may I refer to the value of careful routine examinations in training the fingers to recognize slight degrees of enlargement and hardening of the lymph glands.

One need scarcely refer to looking at the angles of the mouth, or about the anus, for linear scars, as an evidence of hereditary syphilis.

In fully 90 per cent. of our cases we have been able, by a careful routine examination, to find evidences of the previous syphilitic infection, which were afterwards confirmed by the Wassermann test.

Of the great value of the Wassermann test there can be no question. But like other laboratory procedures it has its limitations, and if considered apart from other clinical findings it may

be misleading. It is not a specific test for syphilis, as it has been found positive in malaria, leprosy, yaws, trypanosomiasis, after scarlet fever, etc., but these diseases are not likely to be a source of difficulty with us.

It must not be forgotten that all cases of even frankly active syphilis do not give the Wassermann test, but authorities still differ as to the frequency of failures. Pusey (*Amer. J. of Med. Sci.*, Oct., 1913) says that 40 per cent. give positive reactions at the time of appearance of the initial lesion; six weeks later 75 per cent. react; at the time of appearance of the cutaneous eruption 80 per cent., and in late cases 50 per cent. A larger proportion, probably 90 per cent. of congenital syphilities, give a positive reaction. The value of repeated tests to check technical errors, and the importance of testing the cerebro-spinal fluid, should be kept in mind. It must not be forgotten that a patient with syphilis may suffer from measles, eczema, pneumonia, or a broken leg, so that a positive reaction does not necessarily indicate that the cause of his disability is syphilis. This only emphasizes the danger of accepting a laboratory diagnosis, apart from other clinical data.

The technique of the Wassermann test is difficult, so that the test is not to be relied upon unless carried out by one skilled in serological work. The test is also of value, though not conclusive, as a check on therapeutic results.

Of other recently introduced methods of diagnosis, the cell count, the globulin test and the Wassermann test of the cerebro-spinal fluid in suspected cases of tabes, general paralysis and cerebro-spinal syphilis, are of special value, and are now well recognized routine procedures. The luetin test is also being found of clinical value. There may be a negative blood-Wassermann and a positive cerebro-spinal fluid reaction. All cerebro-spinal cases do not give positive test with the cerebro-spinal fluid.

Time will not permit of more than mentioning a few clinical conditions due to syphilis that are especially important for the practitioner to keep in view.

Syphilitic aortitis and its relation to aortic insufficiency and aneurism is well known. In cases of aortic insufficiency, developing in younger patients, in the absence of a history of rheumatism, or in older patients, evidences of syphilis should be carefully looked for.

Epileptiform convulsions, beginning in adults, are often due to cerebral syphilis, or may be an early sign of general paresis. They are often accompanied by a dizziness, mental disturbance, and intense headache, usually worse at night. Two such cases are at

present under my care in St. Michael's Hospital. Some of these cases are so resistant to mercury and iodide as often to make one doubt their real cause, but these cases may yield in time to persistent treatment to the limit of tolerance. Fordyce insists on the value of Salvarsan in these resistant nervous cases.

In no condition, apart from tumor, does one see such intense headache as in cerebral syphilis. Examination of the eye grounds should of course always be made.

Hemiplegia, occurring in persons under forty, in the absence of a cause for embolism, should arouse suspicion. Facial diplegia, unexplained paralysis of the facial and ocular muscles in adults, or Hutchison's triad of keratitis, deafness and notched or pegged incisor teeth in congenital syphilis, should be borne in mind. A patient came into my wards in St. Michael's Hospital a year ago, partially conscious and with paralysis of one side of the face. He had fallen in the street in a convulsion. An interesting fact in this case was that he had only been infected a few months previously, and some six weeks before entering the hospital he had received an injection of Salvarsan.

The relation of a previous syphilitic infection to some intense forms of anemia, often approaching the pernicious in type, is now generally recognized. It is not surprising that such cases respond extremely well to Salvarsan.

To the treatment of syphilis I shall only refer briefly. As with other infections, it is well to remember that the disease exhibits varying degrees of virulency, some cases being so light that there is possibly a natural tendency to a cure. Recent investigations all go to show that individualism is as necessary in the treatment of syphilis as in any other disease—perhaps more so. The treatment, to be effective, must be systematic, thorough, and the results controlled by carefully following the clinical course and by the Wassermann test. The importance of general care, good habits, hygiene of the mouth, etc., are so obvious as to require no emphasis.

In spite of the brilliant results already obtained by the use of arseno-benzol, mercury and to a lesser extent the iodides, still hold an important place in the therapy of syphilis. Many good authorities believe that the latter are still sufficient in many cases, and even the strongest advocates of Salvarsan, including Ehrlich himself and Wechselmann, advocate the use of mercury before and after a course of Salvarsan. Neisser, Fordyce and other authorities also recommend a similar procedure.

There is much difference of opinion as to the best preparation of mercury to use and the most efficient method in which to use it.

The essential point, as Fordyce points out, is to get mercury into the system. All are agreed that oral administration, injections and inunctions, are efficient means, and each has its advantages in a general way, and its peculiar adaptation to particular cases or phases of the disease.

Oral administration is the most readily carried out, but more easily produces digestive disturbances, and more readily permits the patient to escape the close personal attention which is so necessary for success.

Inunctions are especially valuable in children, and to supplement mercury by the mouth. They can readily be carried out, especially in institutional treatment. It is, however, a disagreeable method to the patient, and usually unsuited, for obvious reasons, for home or ambulatory treatment.

Mercurial injections rapidly bring the patient under the influence of the drug, necessitate his being under the physician's control, and shorten the course of treatment. They are somewhat painful, however, and at times may be dangerous from injection into a vein, and in case of idiosyncrasy the dose has passed beyond the physician's control. These risks are largely avoidable, however, by careful technique. American and continental physicians are partial to this form of treatment.

Considering everything, the best results are to be obtained by the use of the preparation and method with which one is most familiar, and in which the physician has most carefully perfected his technique. Personally, for routine cases, I prefer hydrarg. cum creta with pulv. ipecac. co., as recommended by Hutchinson, because I have found it efficient, and from experience know best how to use it.

Salvarsan is especially useful in the earliest period of syphilis, before general infection, and in the secondary stage of the disease, and in later cases that have not responded satisfactorily to mercury and iodides. I have used it in many cases without ever having had any bad results, and often the effect has been so brilliant as to surpass anything I have seen from any form of therapy. I have had a number of cases that were resistant to mercury, clear up in the most astonishing manner. Numerous fatal results have been reported, but I believe many of these may be attributed to a lack of proper discrimination in the selection of cases, and to faulty technique in the preparation of the solution.

Notwithstanding the general consensus of opinion as to the undoubted value of Salvarsan, increasing experience has not established the hope once entertained of a *Therapia sterilizans magna*.

Most authorities are now agreed that complete cure from it can be hoped for only in the early period of infection and when the treatment is systematically carried out in combination with mercury, the latter preferably by intramuscular injection.

Relapses after Salvarsan, especially the neuro-recurrences, are common, though some believe that this is due to faults in carrying out the treatment.

Neosalvarsan, in the larger doses in which it is used, is regarded by many as equally effective with the old preparation, but I believe that the majority of those who have used it have found the results less satisfactory, and with their experience my own coincides.

Whichever preparation is used, it is certain that good results may be hoped for only after patient, systematic and properly controlled treatment, and anyone who is not prepared to undertake the management in this way assumes a grave responsibility in attempting to treat so serious an infection.

Iodides are especially valuable in the tertiary lesions, and in syphilis of the vascular system, and at times in cerebral or cerebro-spinal syphilis.

The recent discovery of the presence of spirochete in tabes and general paralysis has given a more hopeful outlook to the possibilities of medication in these diseases. The cerebro-spinal axis has proved less accessible to the influence of medication than other tissues, owing chiefly to peculiarities of blood supply. It is believed by good authorities that a complete cure in cerebro-spinal syphilis is impossible when gross lesions or degenerative changes sufficient to produce symptoms have set in. Hence the importance of early diagnosis by examination of the cerebro-spinal fluid and early and thorough treatment.

The plan of attack attempted by Swift and Ellis, of the Rockefeller Institute, of injecting a quantity of the patient's own serum (obtained an hour after an intravenous injection of Salvarsan) into the spinal canal, judging from their report of cases, has given encouraging results in tabes, and to a lesser degree in general paresis. This method, however, has not been sufficiently tested out by other observers to enable a judgment to be formed as to its merits. We have used it in only a few cases. Ravaut advises 3 to 12 mg. Neosalvarsan in a sterile 6 per cent. solution, 1 to 4 drops of which are injected weekly.

As before mentioned, the results of treatment should be checked as far as possible by the Wassermann test and cell count of the cerebro-spinal fluid. While not conclusive, they are probably our best index to the effectiveness of treatment.

For the prophylaxis of syphilitic infection, the plan recommended in 1906 by Metchnikoff and Roux has been tried in the United States army and navy with good results. It consists in the inunction of a 33 per cent. calomel ointment, rubbed on the suspected area for five minutes *within eight hours*, or *at most eighteen hours*, after exposure. It is a simple, practical method, and well worthy of trial.

In conclusion, I wish to say that I have not essayed the impossible task of covering the ground suggested by the subject of my paper, but have attempted to bring forward some points for the consideration and discussion of a disease which demands the most careful study of the profession, not alone from its importance to us as practitioners, but to the community at large.

PNEUMOTHORAX AND REST TREATMENT IN THE MANAGEMENT OF PULMONARY TUBERCULOSIS

By John B. Murphy, M.D., and Philip H. Kreuscher, M.D., Chicago.

Murphy's technique is described in this paper, contributed to the March Special Tuberculosis Number of the *Interstate Medical Journal*, as follows: The patient is placed in a comfortable sitting position and the chest is bared over the side to be injected. The point of insertion of the needle varies somewhat in individual cases. If the apex of the lung be the site of the lesion, the needle should be inserted in the fifth or sixth interspace between the anterior and midaxillary line. The best point is the fifth interspace at or near the anterior axillary line. If it be a middle or lower lobe tuberculosis, the injection should be made over the upper lobe, preferably in the fourth interspace just outside the mammary line. Ethyl chloride may be used for local anesthesia, though we have recently infiltrated the injection zone with a novocaine solution and have found it most satisfactory, for in this way the skin and tissues down to the pleura may be thoroughly anesthetized. A tenotome puncture should always be made through the skin to permit of easy insertion of the needle, to prevent the introduction of septic fragments into the pleura. It is important after the needle is inserted

and before the tube is attached to assure oneself that the point of the needle is in the pleural cavity, and this is done by instructing the patient to take a series of deep inspirations. If the needle is within the pleural cavity there will be a current during both phases of respiration. The opening of the needle should be covered with cotton for the purpose of filtering the air that is admitted and thus diminish the likelihood of infection of the pleura. Sometimes, even though the point of the needle be within the pleural cavity, it is found that the current of gas meets with considerable resistance. This is undoubtedly due to the fact that the current of gas, unless some pressure be used, impinges on a small area of lung tissue, and that it is not sufficient to overcome the cohesion that exists between the two layers of the pleura, which cohesion Lempke said had been estimated at 12½ mm. Hg. To determine that the tip of the needle is in the pleural cavity, a manometer may be used after the manner of Gray, which will indicate the negative pressure by a sudden rise in the near column of the instrument, provided that there is no adhesion between the leaves of the pleura at the point of puncture.

We always use a blunt needle, aspirating size, with an additional opening on the side of the needle near its tip. This opening permits the gas to pass into the pleural cavity should the tip of the needle be plugged by a bit of tissue. After the needle has been introduced, it is attached to the tubing leading to the cylinder which contains the nitrogen gas. The quantity of gas to be injected varies considerably and should range from 50 to 200 c. m., the amount to be given in each case being best regulated by the symptoms of distress, dyspnea, and the displacement of the mediastinal contents and diaphragm. When the proper amount of gas has been injected, the needle is withdrawn, the wound sealed with collodion, and a small firm compress is placed over the puncture. This compress prevents the escape of gas from the pleura into the subcutaneous cellular tissue. The patient is then placed in bed in a comfortable position. If the cough or dyspnea become annoying, a small hypodermic of heroin may be given.

Skiagrams should be made before and after the injections to determine the progress of the disease, to watch the extent of the lung collapse, and to note the pressure on the heart and mediastinum.

THE THERAPEUTIC VALUE OF THE POTATO

By Heaton C. Howard, L.R.C.P. (Lond.), M.R.C.S. (Eng.).

For several years Heaton C. Howard (*The Lancet*, April 11th, 1914) has been studying the therapeutic uses of the potato. He mentions two facts which stand out prominently from his results. The first is the prompt relief of pain, acute or subacute; the second is the rapid absorption of fluid in cases of synovitis where this remedy has been employed. His results have been constant and thoroughly tested.

Upon investigation no alkaloid has been found in the potato, its chief ingredient being potash salts. The basis of all the pharmacological preparations is the liquid extract—extractum solani liquidum. The method of preparation is thus described: The raw potatoes are put into a hydraulic press and the liquid is squeezed out. One-half the weight of the tuber comes away as fluid. From this fluid the starch and nitrogenous matter is removed, leaving the juice with the salts in it. With heat it is concentrated and some glycerine added to preserve it, until it is five times the strength of the juice, i.e., ten times the strength of the potato itself. The ointment is made the same strength as the extract, being prepared chiefly with lard. With equal parts of the extract and lin. saponis co., or two of extract and one of soap liniment, a liniment is made. The plaster is made as ordinary plaster, strength ten to one. All these preparations are now on the market in England and sold at a moderate price.

The action of the liquid extract on synovitis with effusion into the knee-joint, whether traumatic or gouty, speedily relieves pain which does not recur. Absorption of the fluid takes place in four to six days. At the end of a week the patient is up, using the knee slightly. In fourteen to sixteen days he can resume employment.

In acute cases it is applied as a fomentation or poultice, one part of extract to three or four parts of hot water on three or four layers of lint, covered with protective, then cotton wool and a bandage. This should be renewed every two, three or four hours, according to the severity of the case, until the fluid is absorbed. No splint is required, but the patient must be kept in bed. Several cases are cited.

In gout the local treatment relieves the pain more quickly than any other treatment at present used. It is applied, one part of extract to three or four parts of hot water, the same as in synovitis, until the pain and swelling are relieved. One typical and several other cases are recorded.

In lumbago, subacute rheumatism, muscular rheumatism or fibrositis and bruises considerable relief is given.

In lumbago, foment the back well with hot water, and whilst the skin is red have the ointment well rubbed on three or four times a day, the patient being in bed a day or two to give the part rest.

In the various forms of subacute, chronic, muscular rheumatism, a liniment made of two parts of ext. solani to one part lin. saponis rubbed on the part will in most cases give relief after the first or second application.

It has also been of great benefit in sprains and bruises.

The author has found this method of treatment relieves pain much more quickly than lead and opium lotion.

THE CURATIVE TREATMENT OF GENERAL PARALYSIS

By W. H. B. Stoddart, M.D., F.R.C.P.
Superintendent of Bethlem Royal Hospital.

For more than fifty years, Stoddart (*Medical Press and Circular*) says, the probability of syphilis bearing an etiological relationship to general paralysis has been recognized. Patients were treated with mercury and iodide of potassium with no avail. It came to be regarded as an incurable disease. Dr. Claye Shaw had a few successes after trephining and draining the cerebro-spinal fluid, but his plan was not generally adopted. About ten years ago Dr. Ford Robertson, Edinburgh, announced the discovery of the bacillus paralyticans in the cerebro-spinal fluid and that he had secured remissions through a vaccine prepared from the bacillus.

The bacillus paralyticans was not generally accepted, but Robertson's work raised the question of the cause being due to a secondary infection of some kind superimposed upon syphilis. This notion received some support, as patients treated with urotropine for cystitis did well, and cure was even sometimes established. There are few drugs which find their way into the cerebro-

spinal fluid. Potassium iodide fails to enter the cerebro-spinal fluid, but urotropine does; and beneficial results from the latter lent support to the hypothesis of a micro-organism in the nervous system.

For several years, therefore, Stoddart has given all his general paralytics ten grains of urotropine three times a day, and the result has been that no convulsive seizures ever occur, and remissions obtained in 25 per cent. of cases. But in 75 per cent. urotropine has proved a miserable failure.

"Provocative dosage"—a large dose of a drug killing a micro-organism; a small one only stimulating to further activity; the difficulty with large doses of urotropine is that they are liable to cause strangury. Lately Dr. Stoddart has adopted the plan of giving twenty grains four times a day for four days, omitting the drug for four days alternately.

As remissions are liable to occur when the patient is attacked with an acute illness, Pilez hit upon the plan of injecting tuberculin to produce a febrile attack, but in cases where this is tried the patients should have tuberculosis eliminated. After a von Pirquet test is made, a ten per cent. solution of Koch's alt-tuberculin (TA) is prepared as follows: Tuberculin, one part; glycerine, four parts; sterilized water, five parts. One division of a Pravaz syringe—0.01 milligramme of tuberculin—is then injected. Two days later, if the reaction is not severe and the temperature not above 101 deg. F., 0.02 milligramme is given; and then, at intervals of two days, 0.03, 0.04, 0.05 milligramme, up to one-half milligramme. With this treatment Pilez obtained remissions in 26 per cent. of his cases.

Donath, Fischer and Lépine used nucleinate of soda to produce hyperleucocytosis, as follows: Sodium nucleinate, two parts; sodium chloride, two parts; sterilized distilled water, one hundred parts. Donath recommends seven injections of this at intervals of five days. With this he obtained remissions in thirteen out of thirty-six cases.

Salvarsan has been tried by many, all having negative results. This, like mercury and iodide of potash, fail because the choroid plexuses will not allow these drugs to enter the cerebro-spinal fluid. This has been definitely proved.

Swift and Ellis have introduced the intrathecal injection of salvarsanized serum. Salvarsan is first introduced into the blood of the patient by intravenous injection; a quantity of blood is subsequently removed and the serum separated from it, and, lastly, this serum is injected into the lumbar sac of the patient.

This is the most recent treatment and most in vogue at the present time. It has only been introduced in the last few months.

Half a gramme of neosalvarsan is dissolved in about 5c.c. of freshly distilled water. It is very important that the water should be freshly distilled into a sterile flask, for it has been found that the presence of dead bodies of micro-organisms in the solution causes a very severe general reaction, the temperature of the patient rising to 104 to 105 deg. F. after injection. A suitable vein is selected, and with a specially constructed syringe the solution of neosalvarsan is injected into the blood stream. From one hour to four hours later the patient is bled and 40 c.c. of blood are withdrawn into sterile centrifuge tubes. The blood is centrifugalized in the electric centrifuge for one hour so as to separate the clot and corpuscles from the serum, and 12 c.c. of the salvarsanized serum are diluted with 18 c.c. of normal serum.

Venesection is unnecessary, as the blood can be obtained through the needle of the salvarsan syringe, that for the normal serum being obtained just before injecting the salvarsan, and the salvarsanized blood one to four hours later by the same method.

The mixed sera are now heated to 56 deg. C. for half an hour, a lumbar puncture is made and cerebro-spinal fluid is withdrawn until the pressure falls to 30 mm. This sometimes means the withdrawal of 40 c.c. or more of cerebro-spinal fluid. The mixed sera are now injected into the spinal canal and the patient placed in the Trendelenburg position so that they may trickle up to the brain by the force of gravity. This procedure is repeated about once a week until the patient has received about ten injections.

Some physicians dilute the salvarsanized serum with sterile salt solution or distilled water instead of normal serum.

Stoddart pins his faith to the urotropine treatment as the most satisfactory. Ten grains of urotropine three times a day ultimately induces a solution of one in 20,000 of formaline in the cerebro-spinal fluid.

THERAPEUTIC NOTES

Tachycardia.—T. C. Janeway (*Archives of Internal Medicine*) says where great tachycardia sets in acutely, in cases of well-compensated mitral disease, the tachycardia can be controlled by digitalis within forty-eight hours, with complete relief of symptoms. Even under long-continued digitalis medication such patients may maintain a fair working ability for years. Treatment must be instituted before marked dilatation of the right heart and general venous stasis have occurred.

Common Colds.—N. P. Stauffer (*N.Y.M.J.*) treats colds according to three stages of rhinitis. For the dry pricking of nose and throat, with chilliness, headache, absence of secretions, temperature 99 to 104 deg., the treatment should be hot baths, purges—calomel and salts—salts especially to deplete the system of water, rest in bed, icebag to forehead, hot water bag to feet; internally, 10-grain Dover's powder and hot lemonade; in the nose locally, epinephrine, 1:5,000. When the condition is a profuse watery discharge, throat sore, headache less, atropine internally until dryness of nose and throat develops; hot alkaline nasal douches. With mucopurulent discharge, lowered temperature, pulse less bounding, etc., hot alkaline nasal douches, oil sprays, strychnia sulph. 1-100 gr., three times a day; urotropine, 5 grains, three times a day.

Brachial Neuritis.—C. M. H. Howell (*Practitioner*) prescribes for the pain in rheumatic or gouty cases the following: Antipyrine, grs. five to ten; sodium salicylate, grs. ten; caffeine cit., grs. five; aromatic spts. ammonia, one-half dr.; chloroform water, one-half dr.

Sprains and Strains of Knee-Joint.—G. L. Cheatle (*Practitioner*) first prescribes rest for about twenty-four hours, in first sprains where there is no rupture of ligamentum patellæ; a splint not necessary, but a thick layer of cotton wool and a bandage. Cold might arrest the hemorrhage if seen in first five minutes after injury; seen after a half hour, hot and frequent fomentations to the joint. At the end of twenty-four hours, gentle massage

may be applied to the thigh muscles and articulation and passive movement may be begun. In the latter the patient should help the surgeon in every movement. They will be acting with and not against the surgeon. There need be no fear of excessive movement.

In a very severe sprain the treatment should be continued for three or four days, when walking may be cautiously resumed. At the end of a week, massage may be continued and regular muscular exercise performed by weight and pulley attached to wall. If the exercises cause pain and swelling, hot fomentations should be resumed. In chronic cases regular muscular exercises with weight and pulley or Cheatle's foot dumb-bell may be used, but they must be regularly performed. Exercises are devoted mainly to improvement of flexors and extensors.

Threatening Obstetric Hemorrhage.—G. Fieux (*Annales de Gyn. et d'Obs.*) placed the patient in the Trendelenburg position to combat symptoms of ischemia of the brain and found that it arrested at once and permanently the tendency to hemorrhage. After that he applied it in four additional cases. He improvised a support of a chair, face down under the mattress, the back of the chair under the patient's back. By this means the blood in the uterus and vagina falls back and acts as a tampon or plug to the bleeding surface.

Fracture of Patella.—J. Rogers (*Annals of Surgery*) suggests that the autogenous bone graft be taken from the crest of the patient's tibia. This should be placed over the front of the patella and so bridge the lines of fracture. The following is his description of the procedure: Make a V-shaped flap, the apex of the convexity over the ligamentum patellæ, the extremities over the femoral condyles. Then suture the lateral rents in the fibrous capsule. The anterior surface of the patella should be denuded of periosteum about one inch square on each side of the line of fracture. Then expose the crest of the tibia and chisel off a plate one and one-half inches long, three-quarters wide and one-eighth thick from its inner surface. The periosteum of this plate is left undetached. Apply the raw surface of this to the denuded area in front of the patella. The fragments should be united by a figure-eight chromicized catgut or kangaroo tendon suture. This suture grasps the ligamentum patellæ and quadriceps tendon immediately below and above the broken bone and crosses in front

of the transplanted plate. The flap of periosteum is now drawn up to or over the transplanted plate with two catgut ligatures. Close the skin incisions by a subcuticular catgut stitch. Place the limb in a plaster-Paris case splint four or five weeks.

Urticaria.—A. Eustis (*New Orleans Med. and Surg. Jour.*) says the aim in treatment should be to prevent putrefaction of histidine in the intestinal canal. The way to do this is obvious: not to introduce any histidine, or when so introduced to overcome intestinal stasis. An initial purgative, such as calomel and phenolthaleine, of each grains three; pulv. rhu., grains six; misce et caps. number three; one every half hour at night. In the New Orleans Charity Hospital in several hundred cases it has been found that the average time of the first stool has been eight hours after the last dose; little nausea and no colic. A morning saline is not needed as a rule. Daily evacuation of bowels can be best accomplished by two or three-ounce doses of liquid albolene, fig paste with chopped senna leaves, or agar-agar taken in oatmeal in the morning. To overcome the intestinal toxemia, beets, celery, spinach and other articles with much cellulose may be added to the Salomon diet of tea, coffee, bouillon, lemon and grape juice, potatoes, rice, cereals and plenty of butter and sugar, with 200 grammes of bread made of coarse flour. A glass of water on rising in the morning and regularity in emptying the bowels tend to remedy the condition. Examination of the urine for indican should be conducted systematically, and even a trace should call for the elimination of protein food from the diet.

Wounds.—H. Poth (*Deut. Zeit. für Chir.*), noticing that wounds healed exceptionally well and readily in places with low humidity, applied the method in the aseptic treatment of granulating wounds by playing a jet of hot air upon them. He records the details in fifty-two cases with ideal results. Application is made for three-quarters of an hour once a day. The Kutner apparatus for this purpose, however, is expensive.

Prostatectomy.—Van Bisselick (*Zentra. für Chir.*) notes prompt recovery after prostatectomy when a retention catheter is worn continuously for a time and the incision in the bladder sutured, leaving only a small space to bring out one strip of gauze. The catheter is changed daily and the bladder washed every two hours.

Reviews

Students' Pocket Prescriber. By H. Aubrey Husband, M.B. Fourth edition, revised and enlarged. Edinburgh: E. and S. Livingstone.

To gain a knowledge of prescription writing, medical students will find this vest-pocket formulary a good guide. The prescriptions are well selected.

Treatment of Chronic Leg Ulcers, a Practical Guide to Its Symptomatology, Diagnosis and Treatment. By Dr. Edward Adams. 122 Pages. Cloth, $1.00. Published by The International Journal of Surgery Company, 100 William Street, New York City.

This is a small book dealing lucidly and concisely with conditions very often found to be intractable. It is nicely illustrated. There is a brief description of the surgical treatment of enlarged veins.

Interstate Medical Journal. St. Louis, Mo., The Interstate Medical Journal Company.

The March issue is a special Tuberculosis Number, admirably well filled with many original articles by well-known authorities. The price of the journal is $2.00 per annum.

The Intervertebral Foramen. By Harold Swanberg. Chicago: Chicago Scientific Publishing Co.

Mr. Swanberg is a member of the American Association for the Advancement of Science. The book is illustrated with 16 full-page plates, all new. It will enlighten practitioners upon compression of nerves from the foramina, and as to whether a considerable number of pathological conditions can be substantiated on these grounds.

International Clinics. Volume I. Twenty-fourth Series, 1914. Philadelphia, London and Montreal: J. B. Lippincott Co.

As usual the volume is well illustrated. There are seven excellent articles upon Treatment and Therapeutics which alone make the issue valuable. To these add four on medicine, two on surgery; and the epitome of the progress of medicine generally during 1913. No work keeps a medical man any better abreast of the times than does this one.

Biology: General and Medical. By Joseph McFarland, M.D., Professor of Pathology and Bacteriology, Medico-Chirurgical College of Philadelphia. Second edition, thoroughly revised. Octavo of 457 pages, with 160 illustrations. Philadelphia and London: W. B. Saunders Company, 1913. Sole Canadian Agents: The J. F. Hartz Co., Ltd., Toronto. Cloth, $1.75 net.

In the second edition of this interesting book, the author has endeavored to eliminate the defects of the first and has introduced such new matter as would bring it up to present-day thought. That its usefulness is increased thereby will readily be assented to; and that it will serve as a reliable guide to students of biological science.

The Practice of Pediatrics. By Charles Gilmore Kerley, M.D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital. Octavo of 878 pages, 139 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Sole Canadian Agents: The J. F. Hartz Co., Ltd., Toronto. Cloth, $6.00 net; half morocco, $7.50 net.

Our readers will remember a previous volume of Professor Kerley reviewed in these pages a few years ago—The Treatment of Diseases of Children. Many have no doubt found that an admirable guide in practice amongst children. They will be glad to learn Dr. Kerley has put his hand, and mind, and experience to a larger and more comprehensive work. The book is a very complete one and will be sure to take first-class rank with other extensive books of pediatrics.

Dominion Medical Monthly

And Ontario Medical Journal

EDITED BY

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Gynecology: F. W. Marlow, W. B. Hendry.

Genito-Urinary Surgery: T. B. Richardson, W. Warner Jones.

Anesthetics: Samuel Johnston.

GEORGE ELLIOTT, MANAGING EDITOR

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COMMENT FROM MONTH TO MONTH

An Infant Mortality of over six thousand under one year of age and over eight thousand under five years in Ontario in 1912 should call for elaborate work during the coming summer; so in other provinces.

Some boards of health are preparing circulars to mothers, printed in English, French, Hebrew, Italian, German and Russian. Will these circulars be kept even if they are read and remembered? As an infant mortality campaign is concerned most with the poorer and uneducated classes, would not suitably illustrated and neatly printed cards, either framed or suitable for framing, or upon a fine quality of heavy cardboard, be very much better? There should be a staying power to all instructions given to mothers. Circulars are too often immediately destroyed, mislaid or burned. There is nothing in them to beget a saving propensity.

Probably neatly bound books of instruction would be better still. There should be a text-book upon this subject for mothers at a nominal price. It need not be elaborate, but simple, plain,

direct, and to the point. To those who could not buy for themselves they should be furnished free by all municipalities.

If provincial or municipal governments will not publish these there is a first-class opportunity for the Canadian Public Health Association to publish a small Text-Book for Mothers.

Unlicensed and Unauthorized Practitioners of the healing art are flourishing in the Province of Ontario to a degree which is becoming alarming even to the people.

No matter under what sonorous, harmonious and melodious titles they are prosecuting their almost superstitious mummeries, they all practically come under the common category of quackery.

This is amply testified to and borne out by the fact that it is in the cities and towns most quacks prosecute their calling. It is only upon rare occasions an excursion into country districts is taken.

To an educated, trained and humanitarian profession, the condition of quackery running riotously over the Province is becoming exceedingly intolerable.

Any man or woman has as much moral right to issue marriage licenses and perform the marriage ceremony as the hordes of unauthorized charlatans have to style themselves "doctors" and diagnose and treat diseases and persons with which they are so imperfectly acquainted. Surely no person is going to contend in this age that knowledge of the science of medicine which has been so carefully and gradually evolved and built up can be acquired in a few months' course of study which takes no cognizance of the several great branches of medicine.

It is really deplorable to reflect how many apparently intelligent and educated people can be carried away from the cold logic of facts to the specious sophistry of all these uncultured cults.

Nearly a year has passed since Sir James Whitney, now happily almost restored to health, announced the purpose of his government to appoint a commission to inquire into the whole question of medical education and practice in the Province. The medical profession are respectfully and patiently awaiting that commission. The call is loud for the rectification of unjust license,—license, which is paradoxical for it is not true license.

The medical profession stands for two systems, prevention and treatment; and the former is as great a moiety of its work as the latter. Can this be ever said of quackery?

Editorial Notes

MEASURES THAT WILL CAUSE FURTHER DECREASE IN TUBERCULOSIS

(*J. A. M. A.*)

These may be enumerated as, primarily:—

1. General instruction in hygiene and in the conditions that predispose to this disease.
2. Tenement-house laws to prevent overcrowding.
3. Sunlight.
4. Open windows, verandahs and roof-gardens.
5. Municipal breathing-spaces; parks, playgrounds, etc.
6. Proper ventilation of all churches, theatres, halls and assembly-rooms.
7. Open-air schools, or open-window schools.
8. Laws prohibiting spitting on the streets and in buildings.
9. Better factory sanitation; better methods of cleaning public buildings and public conveyances.
10. Special laws against the dissemination of dust in factories, foundries and all occupations in which it may be inhaled.
11. Better hygiene and improved buildings for all general hospitals, prisons and jails.
12. Better laws for the more scientific control of tuberculous cattle, and compulsory cleaning and improving of all cow-barns and farms used for producing public milk supplies.
13. Certification or pasteurization of all milk used for infant feeding.

Personal preventive measures are:

1. Compulsory report of every case of tuberculosis.
2. Careful instruction of the family in the care of the tuberculous person, if he is to remain at home.
3. Careful personal instruction of the patient, if he is at an age to receive it, as to the possible methods of communicating the disease to others.
4. Sanatoriums for incipient cases of pulmonary tuberculosis.
5. Isolation hospitals for advanced tuberculosis patients whose home surroundings are inadequate.
6. Skilled dispensary care of ambulatory cases and visiting nurses for "follow-up" work.

7. Sanatoriums or rest-hospitals for joint and bone tuberculosis; these are of special value when located at the seaside. (The value in glandular tuberculosis of seaside sanatorium or verandah rest-cures should also be recognized.)

8. Careful instruction to reduce the morbid fear of other members of the family, and for the mental comfort and happiness of the patient. This should be given, both by the board of health and by the attending physician, to the effect that the disease is not contagious, and that if the instructions urged are properly carried out the probability of acquiring the disease from the patient is practically nil.

LAKE AND RIVER VESSELS

By Rupert Blue, Surgeon-General, Washington, D.C.

AN OPEN LETTER.

To owners, agents, and masters of lake and river vessels:

Sir,—I desire to call your attention to the fact that there were admitted to the United States marine hospitals during the fiscal year ending June 30, 1913, 392 cases of typhoid fever among seamen employed aboard United States merchant vessels.

Considering the fact that in addition to this number many other cases were treated at various public hospitals and at home, it is evident that the incidence of typhoid among the personnel of our merchant marine is high.

That the question of typhoid prevalence is of prime importance, from the standpoints of health conservation and financial welfare, to seamen, shipping interests, and the public at large, may be readily appreciated when we consider a few facts.

Hospital experience has demonstrated that the average seaman who has an attack of typhoid loses in actual working time, as a result of his illness, from two to four months. Taking two and a half months, which is a fairly low average, as the individual loss in time, and $1.50 as the average daily wage of the employee, it is seen that the above mentioned 392 cases represent in the aggregate a loss of 80 years in actual working time, and of $44,000 in wages. In terms of cold dollars and cents alone, this is a rather heavy price to pay for an entirely preventable disease.

Every case of typhoid must be considered as a focus for the spread of the disease, either during the period of actual illness or subsequent to recovery as a possible "carrier." If such a case or "carrier" is on a vessel, he is not only a constant menace to his fellow shipmates and passengers on account of the close association which exists on board between individuals, but to the public at large, for his frequent shifting from port to port as a travelling focus of infection renders him an active agent in the spread of the disease. As illustrative of the foregoing, it may be stated that recently a "carrier" aboard one of our coastwise vessels was found to have been responsible for the occurrence of 28 subsequent cases of typhoid among the crew, and during the past summer a cook who performed his duties in the galley while in the early stages of his illness played an important part in a serious outbreak of the disease among the passengers and crew of one of our large inland steamers. Such incidents not only militate against operative efficiency, but by becoming general knowledge may affect prospective passenger traffic and occasion financial loss to the steamship company.

In order to efficiently combat typhoid prevalence, it is necessary either to enforce sanitary measures which will protect individuals from the sources of infection, or to immunize them against the disease.

Though the former provision should be carefully carried out by people on board ship as well as on shore, the nature of a sailor's calling necessarily subjects him to many insanitary dangers over which he has practically no control. On account of his close association with fellow shipmates on board, the great variation in character of food and drinking water, and his roving life from port to port, he is exposed to many more sources of infection than is the average citizen who remains at home surrounded by municipal sanitary safeguards.

For these reasons, there is no class of individuals to whom immunization by typhoid prophylactic is of more value as an insurance against the disease than to sailors. There is no doubt that if the practice of typhoid immunization is encouraged aboard ship, there will be a marked reduction in the yearly typhoid rate among crews.

That this method of prevention has long since passed beyond the theoretical and experimental stages is evidenced by the results obtained in the armies and navies of the United States and Europe.

The value of this safeguard is recognized as being so great that vaccination against typhoid is now compulsory in both our military services, and as an instance of what it has accomplished toward prevention of illness and death the following figures give a graphic idea: During the Spanish-American War, in 1898, among 10,759 troops assembled at Jacksonville, Fla., there occurred over 2,000 cases of typhoid, with 248 deaths during a period of about four months. In 1909 the use of the typhoid prophylactic was begun by the Army and was made compulsory late in 1911. The opportunity to observe the results of typhoid vaccination on a large scale was afforded during the summer of 1911, when 20,000 troops were mobilized in Texas and along the southern border of the United States. Among this large assemblage of men, over 9,000 more than were encamped at Jacksonville in 1898, there occurred during the mobilization period of over four months but two cases of typhoid, both mild and ending in recovery. The report of the Surgeon-General of the Army for the fiscal year ending June 30, 1913, states that there occurred during the year, among the entire personnel of the forces stationed within the geographical limits of the United States, but 18 cases of typhoid, with 3 deaths, as compared to 44 cases, with 6 deaths, in 1911; 142 cases, with 10 deaths, in 1910, and 173 cases, with 16 deaths, in 1909.

As showing the War Department's opinion of the value of typhoid vaccination, the following is quoted from the report: "It has now been clearly demonstrated that the immunization against typhoid fever by the use of typhoid prophylactic is a thoroughly practical measure for the prevention of this disease; that it is unattended by bad results; and that its protective value is very probably equal to that afforded against smallpox by vaccination."

Not only are the military establishments availing themselves of this form of insurance against disease and death, but throughout the country many municipal health authorities are bending every endeavor to similarly fortify the citizens of their respective communities.

Therefore, in view of the undoubted value of the use of the typhoid prophylactic to sailors, it is strongly urged that all shipping interests unhesitatingly recommend and encourage their ship employees to avail themselves of this protection against typhoid infection. A display of interest and action on the part of the ship companies, owners, agents, captains, seamen's unions, and others in authority toward the furtherance of a campaign of edu-

cation in typhoid prophylaxis will most certainly be of great value in the fight against this disease.

The United States Public Health Service is ready and willing to render every assistance and advice, and at all relief stations throughout the country service officers are instructed to administer the typhoid prophylactic to all sailors applying for same.

OFFICIAL PROGRAMME OF THE ONTARIO MEDICAL ASSOCIATION

TUESDAY, MAY 26TH.

Registration of Members in Secretary's Office, Medical Building.

SECTION MEETINGS.

10 a.m.—Medical Section. (In North Lecture Room.)

1. Case of Tetanus Treated by Carbolic Acid, with Recovery—Dr. J. T. Fotheringham.
2. Artificial Pneumothorax in the Treatment of Tuberculosis—Dr. C. D. Parfitt.
3. Vincent's Angina, Reports of Cases—By Drs. P. Goldsmith, D. Gibb Wishart, and Brefney O'Reilly.
4. Syphilitic Splenomegaly simulating Banti's Disease—Dr. H. B. Anderson.
5. Case of Splenectomy in Banti's Disease—Dr. J. S. N. Magwood.

10 a.m.—Surgical Section. (In the South Lecture Room.)

1. Acute Intestinal Obstruction—Dr. F. N. G. Starr. Discussion opened by Dr. Rutherford (Stratford).
2. Cardiospasm, with exhibition of two cases—Dr. J. K. McGregor, Hamilton.

10 a.m.—Exhibition of specimens to illustrate Dr. E. Libman's lecture on Subacute Bacterial Endocarditis. These interesting specimens can be seen all day on both Tuesday and Wednesday.

12.30 p.m.—Luncheon in the Medical Building.

2 p.m.—Afternoon.

1. President's Address—Dr. C. F. McGillivray.
2. Symposium on "Syphilis." (*a*) Address—Dr. J. A. Fordyce, New York. (*b*) Syphilis of the Nervous System—Dr. Arthur Ellis, Rockefeller Institute, New York. (*c*) Syphilis from the Standpoint of the Officer of Public

Health—Dr. J. S. W. McCullough. (*d*) Statistics—Prepared by Drs. D. Graham and Dr. R. W. Mann. Discussion.

3.30 p.m.—Business Meeting.

1. Reading of Minutes.
2. Election of Nominating Committee.
3. Reports of Officers.
4. Reports of Committees—
   (1) Necrology—Dr. J. H. Elliott.
   (2) Audit—Dr. E. Ralph Hooper.
   (3) Special Committee on the Question of Fees, etc.—Dr. H. B. Anderson, chairman.
   (4) Credentials—Dr. R. R. Wallace.
   (5) By-laws—Dr. J. W. S. McCullough.
   (6) Ethics—Dr. A. B. Osborne.
   (7) Special Committee on the Amalgamation of the County Societies—Dr. F. Arnold Clarkson.
5. Motions of which notice has been given—
   (1) Dr. A. H. Wright, *re* the Separation of the Ontario Medical Association from the Canadian Medical Association.
   (2) Dr. Harley Smith, *re* a committee for the consideration of all resolutions.
6. Resolutions—
   (1) *Re* the Workmen's Compensation Act.
7. Notices of Motion.

Evening—8 p.m.

1. Address in Surgery—By Dr. Finney, of Johns Hopkins University, Baltimore, "The Cause of Failure in Operations for Cholelithiasis."
2. Address in Obstetrics—By Dr. B. P. Watson.

Wednesday, May 27th.

Clinics and operations at the General Hospital and at the Hospital for Sick Children, and demonstrations in the Pathological Building, all beginning at 9 a.m.

Sick Children's Hospital.

Surgical Section—To be presented by Drs. C. L. Starr, W. E. Gallie, D. E. Robertson, and Bruce Robertson.

1. Congenital Dislocation of Hip. Results of operation.
2. Bone Grafting for Pott's Disease. Results of operations.
3. Tendon Fixation and Transplantation.

4. Fractures of the Elbow, Humerus and Femur. A study of the results of treatment and a demonstration of methods.

Operations—

1. Congenital Dislocation of Hip.
2. Abbott's Treatment of Lateral Curvature of the Spine.
3. Tendon Fixation and Transplantation for Infantile Paralysis.
4. Bone Grafting.

Medical Section—

9 a.m.—Demonstration of Cases in wards—Dr. Allen Baines.
10 a.m.—Rheumatism in Children—Dr. Jos. S. Graham.
10.30 a.m.—Meningitis in Children—Dr. Canfield and Dr. Newell (Watford).
11 a.m.—Congenital Syphilis—Dr. George Strathy.
11.30 a.m.—Birth Palsies—Dr. George Boyer.

Toronto General Hospital.

Medical Clinics—

9 a.m.—Aneurysm—Dr. A. McPhedran, Ward G.
9 a.m.—Cardiac Cases, illustrating various Lesions; Graphic Methods of Examination—Drs. Andrew R. Gordon and Jno. Oille, Ward G.
10 a.m.—Diseases of the Stomach—Dr. G. Chambers, Ward H.
10.30 a.m.—Demonstration of Effect of Treatment in Heart Disease—Dr. R. D. Rudolf, Ward H.
11 a.m.—Anemias—Drs. Fotheringham and Burson, Ward I.
11.30 a.m.—Spastic paraplegia and Treatment with 606—Dr. W. B. Thistle, Ward I.
9 a.m.—Tuberculosis—Outdoor Department—Drs. Parsons, Parfitt and Caulfeild.
9 a.m.—Skin Clinic—Outdoor Department—Drs. D. King Smith, G. E. Smith and Trow.
9 a.m.—Neurology—Outdoor Department—Drs. Howland and Armour.
11 a.m.—Syphilis—Demonstration of Wassermann test, with Cases—Dr. D. Graham, Room 38, Pathological Building.
9 a.m.—Cholelithiasis—Dr. W. Goldie, Outdoor Department.
11 a.m.—Pathology, Autopsies and Fresh Specimens in the Morgue, Pathological Building—Prof. J. J. McKenzie.

Surgical Clinics—

9 a.m.—Diagnosis and After-treatment—Mr. I. H. Cameron, Ward A.

9.30 a.m.—Injuries of Abdominal Viscera—Dr. A. Primrose. Ward C.

10 a.m.—Acute Abdominal Emergencies—Dr. H. A. Bruce, Ward B.

11 a.m.—Dr. G. A. Bingham, Ward B.

9 a.m.—Fractures—Outdoor Department.

1. Non-Operative Treatment—Dr. Shenstone.
2. Operative Treatment—Dr. J. A. Roberts.

9 a.m.—Gastro-intestinal Diseases—Lecture Theatre.

1. Surgical Treatment—Dr. F. N. G. Starr.
2. X-ray Findings—Dr. E. Stanley Ryerson.
3. Chemical Findings—Dr. F. W. Rolph.

Operations.—Operations in all the theatres during the whole morning.

Afternoon, 2 p.m.—Address in Medicine—Dr. E. Libman, Mount Sinai Hospital, New York. "Subacute Bacterial Endocarditis."

3 p.m.—Business Meeting—(1) Report of Committees. (2) Unfinished Business. (3) New Business. (4) Installation of Officers.

Evening, 8 p.m.—Dinner at Royal Canadian Yacht Club. Hon. W. J. Hanna will give an address. Secure your tickets at the time of registration.

THURSDAY, MAY 28TH.

Morning—Clinics at Grace, Western and St. Michael's Hospitals.

Grace Hospital, 9 a.m.

Service of Dr. B. L. Riordan; assistants, Drs. McConnell and Thomas—Treatment of fractures and dislocations; demonstration of when to use Lane's plates. Removal of spleen, stab wound, with case.

Service of Dr. J. Milton Cotton; assistants, Drs. McPherson and Hooper—Wertheim's operation for procidentia uteri; demonstration of cases previously operated on. Single stitch operation for perineorrhaphy. Intestinal stasis; treatment by Coffee's slinging operation, and ileo-sigmoidostomy, with cases already operated upon. Bastianelli's operation for cancer of large bowel, with demonstration of case. Case of Leontiasis ossea.

Service of Dr. W. H. Harris; assistants, Drs. Gilmour and Cerswell—Two cases of decompression for Jacksonian epilepsy. Two cases of tubercular kidney. Post-operative abdominal

ptosis. Ureteral catheterization, and renal surgery demonstration.

Service of Drs. Hamilton, Noble, and Griffith—Medical cases of interest in the wards.

The Diagnosis of Gastric and Intestinal Disorders by means of the X-ray Plates, with cases—Dr. Charles Treble.

Demonstration of Clark's new gas-oxygen-ether sequence for prolonged anesthesia—Dr. Herbert Holm.

Western Hospital.

Medical Clinics—

9 a.m.—Tuberculosis—Drs. Geo. H. Carveth, J. H. Elliott, W. J. Dobbie, W. E. Ogden, and F. C. Neal.

10.30 a.m.—Anemia—Drs. W. J. Wilson, H. B. Anderson, Jno. Ferguson, and Williams (Bracebridge).

Surgical Clinics—

9 a.m.—Hernia operations, under Local Anesthesia—Drs. Ingersoll Olmstead (Hamilton), and Perfect.

10.30 a.m.—Diagnosis and Treatment of Perforation of the Stomach and Duodenum, with patient—Drs. S. M. Hay, W. Heggie, H. A. Beattie, and W. T. Parke (Woodstock).

St. Michael's Hospital.

Medical Clinics—

9 a.m.—Mitral Stenosis—Drs. Dwyer, A. J. McKenzie, and J. H. McPhedran.

11 a.m.—Case of Acromegaly—Dr. Guinane.

11.30 a.m.—Injuries to Musculo-Spinal Nerve—Dr. M. H. V. Cameron.

Surgical Clinics—

9 a.m.—Abdominal traumatism, with cases—Dr. G. Silverthorn.

10 a.m.—Intestinal Anastomosis—Dr. J. F. Uren.

11 a.m.—Demonstrations with the Cystoscope—Dr. George E. Wilson.

Operations in theatre all morning.

Obstetrics and Gynecology.

General Hospital—Wednesday.

9 a.m.—Obstetrical Demonstration—Obstetrical Building—Drs. B. P. Watson, Kinnear, and Mabee.

Abderhalden's Test—Dr. J. G. Gallie.

St. Michael's Hospital—Thursday.

9 a.m.—(1) Use of the Pelvimeter. (2) Abdominal Palpation—Dr. M. M. Crawford.

Gynecology—

General Hospital—Wednesday.

9 a.m.—Gynecological Demonstrations—Drs. Watson, Marlow, Hendry, and Hendrick.

St. Michael's Hospital—Thursday.

9 a.m.—Repair of Perineum and Vagina—Dr. F. A. Cleland.

Section of Eye, Ear, Nose, Throat.

Meetings of this section will be held in the Extern Department and operating room, Ward E, at the Toronto General Hospital.

Wednesday Morning.

9 a.m.—Demonstration of Tonsil Removal—Sluder Method—Drs. J. C. Calhoun and N. K. Wilson.

Leland Method—Dr. Alex. McKelvie.

9 a.m.—Demonstration of Results of Mastoid Operations in Cases Complicated by Sinus Thrombosis—Drs. Perry G. Goldsmith and R. S. Pentecost.

10 a.m.—Radical Mastoid Operation—Dr. Gilbert Royce.

10.30 a.m.—Presentation of cases in Practice and Case Reports—Hereditary Optic Atrophy; Retinitis Pigmentosa; Embolism of Central Artery—Dr. R. A. Reeve.

Not Designated—Dr. Jno. Morton, Hamilton.

Tuberculous Keratitis—Dr. Colin Campbell.

Not Designated—Dr. G. H. Burnham.

Ptosis; Trichiasis—Dr. Geo. McLaren.

Not Designated—Dr. Mortimer Lyon.

Not Designated—Dr. J. M. MacCallum.

Not Designated—Dr. J. Price-Brown.

Suppurative Otitis Media, treated with Zinc Ions—Dr. Hereward Livingstone.

Thursday Morning.

9 a.m.—Suspension Laryngoscopy and Bronchoscopic Examination—Dr. D. J. Gibb Wishart.

9 a.m.—Demonstration of Accessory Sinus and Ethmoid Disease—Dr. Geoffrey Boyd.

10 a.m.—Demonstration of Trephine Sclerostomy—Dr. R. A. Reeve.

10.30 a.m.—Presentation of Cases in Practice and Case Reports—
Results of Radium Treatment—Dr. G. S. Ryerson.
Post-neuritic Optic Atrophy—Dr. J. C. Patton.
Not Designated—Dr. Wm. Wallace, Berlin.
Not Designated—Dr. N. B. Buchanan, Peterboro'.
Keratosis Pharyngis—Dr. N. K. Wilson.
Not Designated—Dr. J. C. Connell, Kingston.
Radical Mastoid Without Packing—Dr. Jane P. Sproule.
Sarcoma of Eyelid—Dr. Angus Campbell.
Diffuse Suppurative Labyrinthitis—Dr. R. S. Pentecost.
Optic Atrophy After Fracture; Interstitial Keratitis in Adult; Optic Atrophy in Intra-Cranial Disease; Stab Wound of Eyeball—Dr. F. C. Trebilcock.

The last hour of each session will be spent in a formal discussion of the demonstrations made, and cases shown during the morning.

We expect that cases and case reports will be presented by other members from the Province, who are not able at this early date to make a definite promise.

Members who wish to present cases or case reports are requested to correspond with the Section Secretary as soon as possible, so that such may be included in a later and more detailed programme which this Section will issue early in May.

2 p.m.—Thursday afternoon.

Through the kindness of the President and Directors of the Ontario Jockey Club, complimentary badges are being issued to members of the Ontario Medical Association and their wives for the races at the Woodbine.

Membership Fees.

Register at Secretary's Office.

Ordinary Members—Annual fee, $5.00, which includes membership in the Canadian Medical Association, the Ontario Medical Association, and the Journal of the Canadian Medical Association for one year.

Associate Members—Annual fee, $2.00, payable on registration only. This admits to the privileges of the Ontario Medical Association only.

Important Notice.—Railway Certificates.

To avail themselves of reduced Convention Railroad Rates, members coming to the meeting must procure, with their single

fare ticket to Toronto, a Standard Certificate. Ask your agent for this when buying your ticket. Hand it to the Secretary at the place of meeting. A special agent will attend each day to visé certificates, for which a fee of 25 cents will be charged. The Association has this year to make a deposit, as a guarantee to the railroads. The Secretary therefore asks each member to present a Railway Certificate no matter how short the distance he has to come. By so doing he helps the members coming from a distance.

BIOLOGICAL PRODUCTS

The Department of Hygiene of the University of Toronto has undertaken to prepare and distribute various biological products. These include diphtheria antitoxin, tetanus antitoxin, anti-meningitis serum and rabies vaccine for the Pasteur treatment.

The prices of these products are only to be slightly above actual cost. The Department has already entered into arrangements with the Provincial Board of Health of Ontario for the distribution of diphtheria antitoxin and rabies vaccine.

The proceeds of the sale of these substances, after paying the cost of maintenance, will go toward aiding research in Preventive Medicine and Hygiene. Under the plan as it is arranged in Ontario all these biological products will be available at exceedingly low prices, and it is hoped that these prices can be reduced still further at a later date.

The work will be under the direction of the members of the Department of Hygiene.

THE ESTABLISHMENT OF A CENTRAL MEDICAL NEWS DEPOT

The omnispective eye of the ubiquitous newspaper man is fast upon the unsuspecting doctor. It watches his every move—be it in the midst of an operation of unusual character, be it in the turning of the pages of a wonderful medical essay. There seems no escape from this chronicling astuteness. It pierces the closed door of the operating room—it invades the privacy of the consulting room; through it does the provincial physician first learn of the marvelous doings of his metropolitan confrére. But

we must finally confess that this enterprising kindness of the newspaper man is not pleasing to us. Is there not some method for us to adopt to insure future relief? An odd feature of newspaper medical literature is that it always involves physicians who have an inborn aversion to publicity, physicians who aim to work unseen.

To-day our paper tells us that kidney diseases are being favorably influenced by this doctor through the injection of salt into the veins—to-morrow we read of a wizard in the East who is conquering syphilitic disease of the brain by means of autoserosalvarsan injections—next week the tale will be one of a pair of kidneys taken from the body and washed free from bichloride ere replacement.

Let us call a halt—it's fair time this indecent pandering to public curiosity ceased, but if this be impossible, and likely it is, then let us, in co-operation with the daily press, establish an authorized central news depôt that a stop may be put to the publication of weirdly fantastic medical tales, at least. The adoption of such a plan would work but slight hardship on the reading public which, of course, must have its modicum of medical information, and but little upon those of us who ooze information at the slightest provocation—so let it be on.—*The Urologic and Cutaneous Review.*

LITERARY NOTE

Be we financier, industrial worker, navvy, scavenger, or merely a gentleman, we all suffer to a greater or less degree from the ills which our vocations or avocations engender. Just how to prevent, ameliorate or cure these but partly understood ills should no longer be a puzzle to the man, employer or physician, because a reliable and essentially practical book is soon to appear, under the joint editorship of Dr. George M. Kober, of Washington, D.C., and Dr. Wm. C. Hanson, of Boston, Mass. Among the contributors are such authorities as Sir Thomas Oliver; Legge (London); Teleky (Vienna); Devoto (Milan); Edsall (Harvard); Alice Hamilton (Chicago); etc., etc. P. Blakiston's Son & Co., Philadelphia, will publish the volume.

News Items

Dr. A. J. Richer, Montreal, is in London, England.

Dr. George P. Sylvester, Toronto, has arrived in Paris from Italy.

Dr. C. F. Martin, Montreal, has returned from a trip round the world.

The Ontario Medical Association meets in Toronto, May 26th, 27th and 28th.

The Canadian Medical Association meets in St. John, N.B., July 7th to 10th.

The Ontario Association of Officers of Health met in Toronto May 7th and 8th.

Dr. H. A. Gibson, Calgary, has passed the F.R.C.S. examinations at Edinburgh.

Dr. R. J. Manion, Fort William, who has been abroad for several months, has returned.

Dr. H. C. Burgess, Montreal, who has spent the past two months in Europe, has returned.

The Æsculapian Society elected the following officers at its last monthly meeting in March: President, Dr. Bruce L. Riordan; Vice-President, Dr. George A. Bingham; Treasurer, Dr. Edmund E. King (re-elected); Secretary, Dr. George Elliott (re-elected).

The Academy of Medicine, Toronto, has elected the following officers: President, Dr. H. B. Anderson; Vice-President, Dr. W. H. B. Aikins; Treasurer, Dr. W. A. Young; Secretary, Dr. J. H. Elliott. Dr. W. Harley Smith, who has been Secretary for several years, retired and was accorded a vote of thanks, as was the retiring President, Dr. Herbert J. Hamilton.

The following appointments have recently been made at Queen's University owing to the retirement of Dr. R. W. Garratt from the professorship of Obstetrics and Pediatrics: Professor of Pediatrics and Gynecology, Dr. G. W. Mylks; Professor of Obstetrics, Dr. A. R. B. Williamson; Assistant Professor of Surgery, Dr. Fotheringham; Lecturer in Clinical Medicine, Dr. E. D. C. MacCallum; Lecturer in Pharmacology, Dr. S. M. Asselstine; Lecturer in Jurisprudence, Mr. J. M. Farrell, B.A. Owing to the adoption of the five-year course, the departments of physics, chemistry, physiology, bacteriology and hygiene will be strengthened.

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